

***PROGRAM OPPORTUNITY NOTICE
GEOTHERMAL TARGET SOLICITATION
CALIFORNIA ENERGY COMMISSION***

UP TO \$7.2 MILLION AVAILABLE FOR FUNDING GEOTHERMAL PROJECTS

The California Energy Commission is opening a new funding opportunity through its Geothermal GRDA and PIER Programs. Funding will be available through the Geothermal Resources Development Account (GRDA) and the Public Interest Energy Research (PIER) program. There will be up to \$7.2 million available to fund geothermal projects. Of these funds, up to \$3.2 million will be for GRDA grants or loans, and up to \$4 million for PIER grants. GRDA funding availability is based on estimated revenues and interest earnings coming from GRDA. Funding of projects is contingent upon the Commission receiving the projected GRDA revenues and the authority to expend those revenues for fiscal year 2004/2005.

The information in this notice will help you to decide whether to apply for funding from the Geothermal Program for this solicitation. Full details are found in the revised *Application Manual*, December 2003, which you can receive by returning the attached form, by sending a fax to (916) 653-6010, by calling (916) 654-5129, or by downloading from our web site at www.energy.ca.gov/geothermal.

Who may apply?

Private entities and local jurisdictions may apply for a GRDA or PIER funded award. Eligible private entities include individuals and organizations engaged in the exploration and development of geothermal energy for profit. Local jurisdictions include cities, counties, any unit of Indian government, school districts and special districts, including but not limited to, regional planning agencies and public utility districts, or any combination thereof formed for the joint exercise of any power. "Public utility districts" do not include any district that generates for sale more than 50 megawatts gross of electricity.

For a GRDA award, other entities, such as universities, national laboratories, state and federal agencies, and not-for-profit organizations, must participate in this program only in partnership with an eligible local jurisdiction or eligible private for-profit entity. The eligible private entity or local jurisdiction must be the applicant.

For a PIER grant, other entities such as universities, national laboratories, state, federal, and local agencies, and not-for-profit organizations may apply directly to the Energy Commission.

What projects are eligible for funding?

GRDA

Practically all aspects of geothermal research, resource development, demonstration, commercialization, planning, environmental enhancement and impact mitigation are eligible for funding. To qualify, your project must **directly** relate to geothermal development, geothermal planning, or the mitigation of the adverse impacts of the development of geothermal energy. Any private entity proposed project must provide tangible benefits, as determined by the Commission, to a local jurisdiction. **Projects must be located in California or be sponsored by a California-based company.** The Commission will not fund advertising, marketing or business plans; drilling bonds; or mitigation measures required for a permit. This program may co-fund project capital costs when justified by the applicant as necessary to advance needed science or technology.

PIER

For a PIER grant, your project must relate to geothermal research, development, and demonstration that addresses a significant California energy problem and provides a clear potential benefit to California electricity ratepayers. In particular, PIER program funds can only be used for energy research, development and demonstration projects that benefit California ratepayers and are not adequately provided for by competitive and regulated energy markets. In addition, PIER funded projects **must** also provide benefits to electricity ratepayers. Because of these requirements, the PIER program has emphasized electricity-related RD&D activities. However, RD&D efforts which benefit other types of energy users may qualify for PIER funding **if** projects **also** provide benefits to electricity ratepayers.

How much financial assistance is available?

A total of up to \$7.2 million is available for project funding through this solicitation. Of these funds, up to \$3.2 million will be for GRDA grants or loans, and up to \$4 million for PIER grants.

GRDA

For GRDA grants and loans, there are no predetermined limits on the funding that can be requested for a project. The Commission will allocate at least 25 percent of GRDA available funding to projects in each of the three project categories 1) Resource Development, 2) Planning, or 3) Mitigation.

The Commission may allocate the remaining funds to any of the three project categories. Projects shall be divided into one of the three project categories. Projects will be ranked in order within each project category. Projects shall be funded in the order of ranking beginning with rank 1. Awards are limited by the applicant's match share and by the availability of GRDA funds after higher-ranking projects have been funded. Funding of projects is contingent upon the Commission receiving the projected GRDA revenues and the authority to expend those revenues for fiscal year 2004/2005.

PIER

For PIER grants, you may request up to \$1 million for a project.

What type of funding assistance is available?

GRDA and PIER

Funding assistance is available as a grant or a loan. You must request one of the following in the pre-application and the final application: a GRDA grant, a GRDA loan, or a PIER grant. The Commission is interested in supporting higher-risk activities not readily financed by commercial lenders, but expected to produce economic and environmental benefits for California. A large percentage of the funding will likely be awarded in the form of grants.

However, if you expect your project to produce **near-term** revenues or energy cost savings, you must apply for a GRDA loan. One example would be a project that increases generating capacities of existing geothermal power plants such as waste water injection. Near-term is defined as less than three years after completion of the project that is co-funded by the Commission through this solicitation.

GRDA LOANS

For GRDA loans, the interest rate is tied to a set of market indices and depends on the term of repayment selected by the applicant. Interest rates for local jurisdictions are tied to the average of the cities and counties 12-22 year general obligations listed in the **Merrill Lynch Municipal Bond** index as reported in the **Wall Street Journal**. Interest rates for private for-profit entities are tied to the **Prime Rate** (Prime) index as reported in the **Wall Street Journal**. The interest rate for any approved project would be based on either the appropriate index and rate, or the Pooled Money Investment Account rate in effect on the day the final applications are due to the Commission (whichever is higher). The final approval use of the established indices and rates are determined at the Commission business meeting. Note: the Pooled Money Investment Account rate for the August, 2003 through October, 2003 90-day average was 1.621 percent.

Loan Interest Rate Table

Repayment Term (Years)	Interest Rate (%) for Local Jurisdictions	Interest Rate (%) for Private for-profit Entities
0-4	ML Municipal Bond minus .375	Prime Rate plus .125
5-7	ML Municipal Bond minus .125	Prime Rate plus .625
8-12	ML Municipal Bond plus .375	Prime Rate plus 1.125
13+	ML Municipal Bond plus .625	Prime Rate plus 1.625

You can select the term of repayment and corresponding interest rate most appropriate for the proposed project. The interest rate will not change during the life of the project or the repayment period. The Energy Commission will generally establish a maximum repayment term of 15 years. You must provide sufficient collateral to secure all loans.

How much will the applicant need to contribute to the project?

GRDA and PIER

A match contribution is required to participate in this Geothermal Solicitation. A match contribution is cash, equipment, and/or in-kind services provided by the applicant or other sources secured by the applicant toward completion of the awarded project. Staff time, laboratory space, equipment, and other grants, loans, or contracts can count toward the match contribution.

To qualify as a match contribution, these contributions must be 1) dedicated to the project, 2) based on documented current market values, and 3) depreciated or amortized over the project's life. If a piece of equipment is not solely dedicated to the project, the prorated value of the equipment by percentage of use for the project will count toward the match contribution. Match fund expenditures must occur within the grant or loan term.

Private For-Profit Entities must provide a match contribution of at least 50 percent of the overall project cost.

GRDA

Local jurisdictions must provide a match contribution of at least 20 percent of the overall project cost. Local jurisdictions located in a county that has received "County-of-Origin" funds from the state's GRDA in excess of \$50,000 in each of the previous three years must provide a match contribution of at least 50 percent of the total project cost.

PIER

For a PIER grant, other entities such as universities, national laboratories, state, federal, and local agencies, and not-for-profit organizations must provide a match contribution of at least 20 percent of the overall project cost.

What are the application, award, and project start dates?

The schedule for this funding cycle is as follows:

Geothermal Target Solicitation Workshop at CEC:	January 20, 2004
Pre-applications due on or before:	4:00 p.m., February 17, 2004
Written comments on pre-applications mailed:	March 22, 2004
Final applications due on or before:	4:00 p.m., April 6, 2004
Notice of Proposed Awards:	May 21, 2004 (Estimated)
Commission Approval of Awards:	June 2, 2004 (Estimated)
Begin executing Agreements:	July 1, 2004 (Estimated)

How do I get application materials?

The Commission invites you to contact us regarding this solicitation and the Geothermal Program. If you have access to the Internet, you may visit the Commission's web site at **www.energy.ca.gov/geothermal**. **At this web site you can learn more about this program and you will also be able to download the *Application Manual*, December 2003, and its attachments for this solicitation in a form that will allow you to complete the application on your computer.**

If you would like an *Application Manual* mailed to you, please complete the following form and mail or fax it to the indicated address.

Geothermal Program *Application Manual* Request Form

Yes! Send me a copy of the *Application Manual*, December 2003

Name

Title

Company or Organization

Street Address

City (do not abbreviate)

State

Zip Code

Telephone Number (include area code)

Fax Number (include area code)

E-Mail Address

Mail or fax to: **Geothermal Program
California Energy Commission
Research and Development Office
1516 Ninth Street, MS-43
Sacramento, CA 95814-5512**

Phone: (916) 654-5129

Fax: (916) 653-6010

CALIFORNIA
ENERGY
COMMISSION

**APPLICATION MANUAL
FOR THE GEOTHERMAL
TARGET SOLICITATION**

MANUAL

December 2003



Arnold Schwarzenegger, Governor

CALIFORNIA ENERGY COMMISSION

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We welcome your comments and suggestions for improving this *Application Manual* for the Geothermal Target Solicitation at any time. If you have any questions or comments about these materials, write or call:

**CALIFORNIA ENERGY COMMISSION
Research and Development Office
Geothermal Program
1516 Ninth Street, MS-43
Sacramento, CA 95814-5512**

**Tel: (916) 654-5129
Fax: (916) 653-6010**

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I. Introduction

This *Application Manual* for the Geothermal Target Solicitation provides information for applying for a grant or a loan to conduct a geothermal project.

This *Application Manual* is organized as follows:

Part I. Introduction

Part I provides the organization of the *Application Manual*.

Part II. Overview

Part II provides an overview of the GRDA and PIER programs.

Part III. Commonly Asked Questions about the Geothermal Solicitation

Part III answers the commonly asked questions about the program.

Part IV. Application Instructions

Part IV includes application instructions for Sections A-I for applying for funding.

Part V. Application Forms

Part V includes the application forms for Sections A-I for applying for funding.

Part VI. Exhibits

Part VI includes exhibits for additional solicitation information.

II. Overview

The California Energy Commission (Commission) is opening a new funding opportunity through its GRDA and PIER Geothermal Programs. This is the *Application Manual* for the Geothermal Target Solicitation (Geothermal Solicitation). Funding will be available through the Geothermal Resources Development Account (GRDA) and the Public Interest Energy Research program (PIER). There will be up to \$7.2 million available to fund geothermal projects. Of these funds, up to \$3.2 million will be for GRDA grants or loans and up to \$4 million for PIER grants. GRDA funding of projects is contingent upon the Commission receiving the projected GRDA revenues and the authority to expend those revenues for fiscal year 2004/2005.

GRDA

The California Legislature established the Geothermal Program in 1980 under Public Resources Code section 3800 et seq. It created the GRDA as the source of funding. The funds for this account come from revenues paid to the United States government by geothermal developers for leases on federal land in California. Eligible private entities and local jurisdictions can qualify for assistance in geothermal research, development, demonstration, commercialization, planning, mitigation and environmental enhancement projects. Detailed information about the Geothermal Program can be found on the Commission web site at **www.energy.ca.gov/geothermal**.

PIER

The PIER program funds energy research, development and demonstration projects that benefit California ratepayers and are not adequately provided for by competitive and regulated energy markets.

Assembly Bill (AB) 1890 (1996 California Statutes, Chapter 854) was signed into law in September of 1996, setting forth a fundamental restructuring of California's electric services industry. Among other things, AB 1890 added Section 381 to the Public Utilities Code requiring that funds be collected annually from investor-owned electric utility ratepayers for "public interest" energy RD&D efforts not adequately provided by competitive and regulated markets.

As funds for the PIER program are paid by specified investor owned utility (IOU) electricity ratepayers, the RD&D efforts supported by these funds **must** provide benefits to these electricity ratepayers. However, while the program will emphasize electricity-related RD&D activities, RD&D efforts which benefit other types of energy users may also qualify for PIER funding **if** such projects **also** provide benefits to electricity ratepayers.

Pursuant to AB 1890, the California Public Utilities Commission (CPUC) subsequently transferred responsibility to the Commission for administering annually the PIER funds for specified RD&D efforts.

On September 30, 2000, the Governor signed AB 995 (Wright) extending PIER until January 1, 2010 and allocating funds to the program. Detailed information about the PIER program can be found on the Commission web site at **www.energy.ca.gov/research**.

III. Commonly Asked Questions about the Geothermal Solicitation

Introduction

This part answers the commonly asked questions about the Geothermal Solicitation to help you determine whether or not to apply for assistance. This part should also help you understand the award process.

The Commission has established funding partnerships with public and private entities to promote development of new geothermal resources and technologies. Financial assistance is provided in the form of a grant or a loan through the GRDA, or a grant through the PIER program. A match contribution in cash, equipment, or services is required.

This *Application Manual* is a combined application package for GRDA and PIER. The Commission accepts applications for funding during two specific periods as announced in a Program Opportunity Notice and as posted on the Commission's Internet web site at **www.energy.ca.gov/geothermal**. Critical dates are also noted in this *Application Manual*.

The following questions and answers will help you decide whether to apply under this program. The questions and answers will help you understand the application and award process.

Who may apply?

GRDA and PIER

Private entities and local jurisdictions may apply for a GRDA or PIER funded award. Eligible private entities include individuals and organizations engaged in the exploration and development of geothermal energy for profit. Local jurisdictions include cities; counties; any unit of Indian government; school districts; and special districts, including but not limited to, regional planning agencies and public utility districts, or any combination thereof formed for the joint exercise of any power. "Public utility districts" do not include any district that generates for sale more than 50 megawatts gross of electricity.

GRDA

For a GRDA award, other entities, such as universities, national laboratories, state and federal agencies, and not-for-profit organizations, must participate in this program only in partnership with an eligible local jurisdiction or eligible private for-profit entity. The eligible private entity or local jurisdiction must be the applicant. Any loan or grant made to a private entity or local jurisdiction pursuant to Section 3822, Article 3, (g), of the *Public Resources Code*, shall: (1) be matched with at least an equal investment by the recipient, (2) provide tangible benefits, as determined by the Commission, to a local jurisdiction, and (3) be approved by the city, county, or Indian reservation within which the project is to be located.

PIER

For a PIER grant, other entities such as universities, national laboratories, state, federal, and local agencies, and not-for-profit organizations may apply directly to the Energy Commission.

What projects are eligible for funding?

GRDA

For GRDA awards, practically all aspects of geothermal research, resource development, demonstration, commercialization, planning, environmental enhancement and impact mitigation are eligible for funding. To qualify, your project must **directly** relate to geothermal development, geothermal planning, or the mitigation of the adverse impacts of the development of geothermal energy. Any private entity proposed project must provide tangible benefits, as determined by the Commission, to a local jurisdiction. **Projects must be located in California or be sponsored by a California-based company.** The Commission will not fund advertising, marketing or business plans; drilling bonds; or mitigation measures required for a permit. This program may co-fund project capital costs when justified by the applicant as necessary to advance needed science or technology.

PIER

For a PIER grant, your project must relate to geothermal research, development, and demonstration that addresses a significant California energy problem and provides a clear potential benefit to California electricity ratepayers. In particular, PIER program funds can only be used for energy research, development and demonstration projects that benefit California ratepayers and are not adequately provided for by competitive and regulated energy markets. In addition, PIER funded projects **must** also provide benefits to electricity ratepayers. Because of these requirements, the PIER program has emphasized electricity-related RD&D activities.

However, RD&D efforts which benefit other types of energy users may qualify for PIER funding **if** projects **also** provide benefits to electricity ratepayers.

GRDA and PIER

For this solicitation, we want to see projects in the areas identified in this *Application Manual*, Part III *How is the final application processed?*, #2 Scoring. Projects in these areas may receive points under the overriding issues evaluation criteria.

To which project category should the applicant apply?

Listed below are examples of the types of projects that qualify under each project category.

There are many types of projects that cut across both GRDA and PIER. For these types of projects, you **must** choose which program area to apply for (GRDA or PIER).

Listed below are examples of the types of projects that qualify under each funding source.

GRDA

GRDA projects fall under three categories: resource development projects, planning projects and mitigation projects.

Resource Development Projects:

“Resource Development Project” means an eligible activity including research that assesses, develops, or converts a geothermal resource for direct use or electrical generation. Your application will be evaluated based on the criteria in Scoring Table 1 found in this *Application Manual*, Part III *How is the final application processed?*, #3 Scoring Criteria. Keep these criteria in mind when selecting the program area. Examples of Resource Development projects include:

- Demonstrations or commercialization of geothermal technologies.
- Resource assessment (including, but not limited to geological, hydrological, geophysical, and geochemical).
- Evaluation, drilling, and testing of exploration, production, and injection wells.
- Electricity production.
- Development of direct-use projects including space heating/domestic water supply, aquaculture, and industrial process heat, etc.

Planning Projects:

“Planning Projects” means an eligible activity that regulates or guides the development and use of geothermal resources. Your application will be evaluated based on the criteria in Scoring Table 2 found in this *Application Manual*, Part III *How is the final application processed?*, #3 Scoring Criteria. Keep these criteria in mind when selecting the program area. An example of a Planning project is the collection and analysis of environmental data.

Mitigation Projects:

“Mitigation Project” means an eligible activity that identifies the adverse environmental or public service impacts of geothermal energy development, or implements measures to reduce or eliminate those impacts. Your application will be evaluated based on the criteria in Scoring Table 3 found in this *Application Manual*, Part III *How is the final application processed?*, #3 Scoring Criteria. Keep these criteria in mind when selecting the program area. Examples of Mitigation projects include:

- Identification and control of adverse impacts to water, air, wildlife, vegetation, viewshed, ground surface levels, and ambient noise levels;
- Environmental enhancement;
- Identification of social and economic impacts of geothermal development.

The following ***Public Resources Code*** includes a listing of projects that are statutorily eligible for funding consideration:

PUBLIC RESOURCES CODE – DIVISION 3, ARTICLE 3 **Section 3823. Expenditures; Revenues and Grants; Activities**

Revenues disbursed to counties of origin pursuant to Section 3821 and grants or loans made to local jurisdictions or private entities pursuant to Section 3822 shall be expended by the county or recipient for the following purposes:

- a) Undertaking research and development projects relating to geothermal resource assessment and exploration, and direct-use and electric generation technology.
- b) Local and regional planning and policy development and implementation necessary for compliance with programs required by local, state, or federal laws and regulations.
- c) Identification of feasible measures that will mitigate the adverse impacts of the development of geothermal resources and the adoption of ordinances, regulations, and guidelines to implement those measures.
- d) Collecting baseline data and conducting environmental monitoring.
- e) Preparation or revision of geothermal resource elements, or geothermal components of energy elements, for inclusion in the local general plan, zoning and other ordinances, and related planning and environmental documents.
- f) Administrative costs incurred by the local jurisdiction that are attributable to the development or production of geothermal resources.
- g) Monitoring and inspecting geothermal facilities and related activities to assure compliance with applicable laws, regulations, and ordinances.

- h) Identifying, researching, and implementing feasible measures that will mitigate the adverse impacts of that development or production.
- i) Planning, constructing, providing, operating, and maintaining those public services and facilities that are necessitated by and result from the development or production.
- j) Undertaking projects demonstrating the technical and economic feasibility of geothermal direct heat and electrical generation applications.
- k) Undertaking projects for the enhancement, restoration, or preservation of natural resources, including, but not limited to, water development, water quality improvement, fisheries enhancement, and park and recreation facilities and areas.

PIER

If you are proposing a geothermal research, development, and/or demonstration project that addresses a significant California energy problem and provides a clear potential benefit to California electricity ratepayers, you qualify to apply for a PIER grant. Your application will be evaluated based on the criteria in Scoring Table 4 found in this *Application Manual*, Part III *How is the final application processed?*, #3 Scoring Criteria. Examples of PIER RD&D projects that may enhance the competitiveness of, and promote the use of, geothermal energy by focusing on one or more of (but not limited to) the following:

- Lowering the risks and associated costs of developing geothermal resources. These costs will be lowered by finding improvements in the ways to reduce the costs of exploration, drilling and completing geothermal wells; improving the understanding of basic geological conditions associated with hydrothermal systems; and enhancing reservoir management.
- Reducing the cost of producing geothermal power. These cost will be lowered by developing perhaps a new generation of binary geothermal turbines with improved thermodynamic efficiency, advanced heat rejection systems, and considerable reduction in equipment and construction costs;
- Developing other sources of revenues such as value-added products, mineral recovery, and cascaded use of heat;
- Investigating and developing small-modular and possibly hybrid geothermal facilities for load following and peaking applications.

What type of funding assistance is available?

Funding assistance is available as a grant or a loan. You must request **one** of the following in the pre-application and the final application: GRDA grant, GRDA loan, or PIER grant.

The Commission is interested in supporting higher-risk activities not readily financed by commercial lenders, but expected to produce economic and environmental benefits for California. A large percentage of the funding will likely be awarded in the form of grants.

However, if you expect your project to produce **near-term** revenues or energy cost savings, you must apply for a GRDA loan. One example would be a project that increases generating

capacities of existing geothermal power plants such as waste water injection. Near-term is defined as less than three years after completion of the project that is co-funded by the Commission through this solicitation. Repayment of a GRDA loan with a private entity includes the principle and interest. Repayment of a project co-funded with a local jurisdiction is based on revenues and/or energy cost savings.

The Commission (with the agreement of the applicant) reserves the right to change the type of funding assistance, grant versus loan, if the Commission believes that the type being requested is not appropriate based on the project being proposed.

- **Revenue** means all economic benefit determined in accordance with generally accepted accounting principles and expressed in dollars.
- **Energy Cost Savings** means the difference between the baseline energy cost and the system operation and maintenance cost for each year over the life of the project's repayment period. At the discretion of the Commission, energy savings may be calculated on the whole or any part of the system(s), all or part of which are proposed to be developed, modified, or expanded through a co-funded agreement.
- **Baseline Energy Cost** means the cost of energy that would be incurred by the recipient during the repayment period if not for the installation of the system(s). This cost is derived by multiplying the annual energy use of the original system, as calculated in the energy audit (after installation of any conservation measures), by the price for that energy at the beginning of the repayment period. Baseline energy cost may vary for each year of the repayment period and may escalate according to the projections in the most recently adopted Energy Commission price forecast.
- **System Operation and Maintenance Cost** means the cost of labor for maintenance (existing staff or Applicants hired by the recipient), equipment and consumables, incurred by the recipient to operate the system(s), all or part of which is proposed to be developed, modified, or expanded with this funding agreement. Operation and maintenance cost does not include interest expenses, depreciation expenses claimed by the recipient, or other payments made by the recipient to a contingency reserve fund or other such account set up for the long-term repair and maintenance of the system(s).

For GRDA loans, the interest rate is tied to a set of market indices and depends on the term of repayment selected by the applicant. Interest rates for local jurisdictions are tied to the average of the cities and counties 12-22 year general obligations listed in the **Merrill Lynch Municipal Bond Index** as reported in the *Wall Street Journal*. Interest rates for private for-profit entities are tied to the **Prime Rate Index** (Prime) as reported in the *Wall Street Journal*.

The Commission approved a sliding-scale interest rate for the public sector based on the Merrill Lynch Municipal Bond Index, and a sliding-scale interest rate for the private sector based on the Prime Interest Rate Index. The table below reflects the approved terms and indices to be used by the Commission's Geothermal Program.

Loan Interest Rate Table¹

Repayment Term (Years)	Interest Rate (%) for Local Jurisdictions	Interest Rate (%) for Private for-profit Entities
0-4	ML Municipal Bond minus .375	Prime Rate plus .125
5-7	ML Municipal Bond minus .125	Prime Rate plus .625
8-12	ML Municipal Bond plus .375	Prime Rate plus 1.125
13+	ML Municipal Bond plus .625	Prime Rate plus 1.625

The interest rate for any approved project would be based on either the appropriate index and rate, or the Pooled Money Investment Account rate in effect on the day the final applications are due to the Commission (whichever is higher). The final approval use of the established indices and rates are determined at the Commission business meeting.

Note: the August, 2003 through October, 2003 90-day average Pooled Money Investment Account rate was 1.621 percent.

You can select the term of repayment and corresponding interest rate most appropriate for the proposed project. The interest rate will not change during the life of the project or the repayment period. The Energy Commission will generally establish a maximum repayment term of 15 years. You must provide sufficient collateral to secure all loans.

How much will the applicant need to contribute to the project?

GRDA and PIER

A match contribution is required to participate in this Geothermal Solicitation. A match contribution is cash, equipment, and/or in-kind services provided by the applicant or other sources secured by the applicant toward completion of the awarded project. Staff time, laboratory space, equipment, and other grants, loans, or contracts can count toward the match contribution.

To qualify as a match contribution, these contributions must be: 1) dedicated to the project, 2) based on documented current market values, and 3) depreciated or amortized over the project's life. If a piece of equipment is not solely dedicated to the project, the prorated value of the equipment by percentage of use for the project will count toward the match contribution. Match fund expenditures must occur within the grant or loan term.

Private For-Profit Entities must provide a match contribution of at least 50 percent of the overall project cost.

GRDA

Local Jurisdictions must provide a match contribution of at least 20 percent of the overall project cost. Local jurisdictions located in a county that has received "County-of-Origin" funds from the state's Geothermal Resources Development Account in excess of \$50,000 in each of the previous three years must provide a match contribution of at least 50 percent of the total project cost.

¹The Energy Commission must approve this interest rate schedule each fiscal year.

PIER

For a PIER grant, other entities such as universities, national laboratories, state, federal, and local agencies, and not-for-profit organizations must provide a match contribution of at least 20 percent of the overall project cost.

How much financial assistance is available?

A total of up to \$7.2 million is available for project funding through this solicitation. Of these funds, up to \$3.2 million will be for GRDA awards and up to \$4 million will be for PIER grants. GRDA funding availability is based on estimated revenues and interest earnings coming from GRDA.

GRDA

For GRDA grants and loans, there are no predetermined limits on the funding that can be requested for a project. The Commission will allocate at least 25 percent of GRDA available funding to projects in each of the three project categories 1) Resource Development, 2) Planning, or 3) Mitigation.

The Commission may allocate the remaining funds to any of the three project categories. Projects shall be divided into one of the three project categories. Projects will be ranked in order within each project category. Projects shall be funded in the order of ranking beginning with rank 1. Awards are limited by the applicant's match share and by the availability of GRDA funds after higher-ranking projects have been funded. Funding of projects is contingent upon the Commission receiving the projected GRDA revenues and the authority to expend those revenues for fiscal year 2004/2005.

PIER

For PIER grants, you may request up to \$1 million for a project.

How and when will funds be distributed?

Commission funds are paid on a **reimbursement basis**. Payment will be made approximately **45 days** after the Commission receives a properly submitted, undisputed invoice. It is the Commission's policy to **retain 10 percent** of the total Commission award. The determination on how retention is withheld is at the discretion of the Commission Program Manager. These retained funds will be released when the Commission Project Manager, with the approval of the Commission Program Manager, is satisfied that the terms of the funding agreement have been fulfilled.

How much paperwork will there be if the project is funded?

All funding recipients must submit written quarterly progress reports, reimbursement requests, a draft and final report. Some projects also may require technical reports and other documentation of the success or the actual benefits produced by the project.

How is confidential information treated?

Commission staff can work with you to safeguard confidential records. However, you should not submit confidential information unless it is absolutely necessary. **Income tax returns, financial statements and credit reports included in Section I *Financial* of your application will remain confidential.** If you need to submit other confidential information to support your application, **stamp the documents as “CONFIDENTIAL” and submit it as a separately bound Volume 2 Section H** with your application. If your application is not approved, Commission staff will destroy copies of your application and confidential information. If your application is approved, confidential information will remain confidential. Commission staff will retain the original and copies of the approved final applications and confidential information for the life of the project or as deemed by Commission Legal Counsel. Commission staff will destroy other final application copies. For additional information, see **Section H *Confidential Products and Pre-existing Intellectual Property Lists***, and see **Attachment H.1** for the confidential application form.

What are the application, award, and project start dates?

The schedule for this funding cycle is as follows:

Geothermal Target Solicitation Workshop at CEC:	January 20, 2004
Pre-applications due on or before:	4:00 p.m., February 17, 2004
Written comments on pre-applications mailed:	March 22, 2004
Final applications due on or before:	4:00 p.m., April 6, 2004
Notice of Proposed Awards:	May 21, 2004 (Estimated)
Commission Approval of Awards:	June 2, 2004 (Estimated)
Begin executing Agreements:	July 1, 2004 (Estimated)

We encourage you to submit your pre-application prior to the due date. This will enable staff to return comments to you on the pre-application as far in advance of the final application due date as possible.

How do I apply?

All applicants must submit a pre-application. Only those applicants who meet the minimum eligibility criteria and who have submitted a pre-application by the deadline may submit a final application. Please examine the review procedures and evaluation criteria when preparing applications. Multiple projects cannot be proposed in a single application. Use the attached application forms to ensure that you provide the needed information. Instructions and helpful “tips” are provided in each part of the application package.

What is the pre-application?

Applicants must submit a pre-application to participate in this funding opportunity. The Commission will review each pre-application submitted by the deadline published in the program opportunity notice and noted above. Submitting your pre-application early will enable staff to return comments to you on the pre-application as far in advance of the final application due date as possible. The pre-application information **required** is described in **Sections A-F** and **Section H** of this *Application Manual*. The pre-application results in an informal review to determine the applicant's eligibility and make a preliminary evaluation of the proposed project application. Commission staff will return written comments on the pre-application to each applicant.

The **pre-application** must include the following:

Volume 1 (Separate Volume)

Section A: *General Information*

Section B: *Project Description, Goals, and Actions*

Section C: *Project Benefits to California*

Section D: *Project Tasks and Schedule*

Section E: *Project Management Structure and Personnel*

Section F: *Budget, Products and Due Dates*

Volume 2 (Separate Volume)

Section H: *Confidential Products and Pre-existing Intellectual Property Lists* for Sections A-F: Submit Attachment H.1 to identify whether or not confidential information will be included in the application. Also, **if applicable**, submit Attachment H.1 and the confidential documents as a separately bound Volume 2.

Supporting Documents

Applicants must reference any necessary supporting documents in the appropriate application section **and** append these documents immediately behind the applicable section(s) of the pre-application.

PRE-APPLICATION DUE DATE:

Send or deliver your pre-application in the required formats stated below to the following address on or before **February 17, 2004 at 4:00 p.m.**

**Geothermal Program
California Energy Commission
Grants and Loans Office
1516 9th Street, MS-1
Sacramento, CA 95814-5512**

Applicants are required to submit the pre-application and all supporting documents in the formats as follows by the due date listed above:

Paper Original: One (1) signed paper original (signature in ink and clearly marked “original”).

- Volume 1 Sections A-F, and all supporting documents.
- Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).

Paper Copies: Ten (10) paper copies

- Volume 1 Sections A-F, and all supporting documents.
- Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).

Electronic Copy: One (1) electronic copy on a 3.5” Disk, Zip Disk or CD

- Volume 1 Sections A-F, and all supporting documents, including electronic version of graphs, tables, charts, maps, and pictures.
- Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).
- **Exception:** Supporting documents (references) and graphics not in electronic version are not required to be submitted in electronic copy.

Pre-Applications submitted by fax or e-mail will NOT be accepted.

Pre-applications that have not been received at the above listed location by February 17, 2004 at 4:00 p.m. will be rejected. With the exceptions stated above, the following must be submitted by the due date: One (1) paper original, ten (10) paper copies, and one (1) electronic copy of your pre-application, Volume 1 Sections A-F and Volume 2 Section H. Failure to provide the required original, copies, and electronic copy of your pre-application may be grounds for disqualification. Incomplete packages may be rejected.

How is the pre-application processed?

1. **Complete pre-application.** Commission staff will initially evaluate your pre-application for completeness and to ensure that your proposed project is eligible. Complete pre-applications must include Volume 1 Sections A-F and Volume 2 Section H Attachment H.1. Also, if applicable, include Volume 2 Section H (including Attachment H.1 and confidential documents). **We will return incomplete or ineligible applications with a letter of explanation.**
2. **Comment Letters.** Commission staff prepares written comment letters to the pre-applicants based on the pre-application reviews. The purpose of the comment letter is to improve the applicant’s opportunity for funding. Applicants should address Commission staff comments and recommendations in the final application.

What is the final application?

The Commission will only accept final applications from qualified pre-applicants. The final application is the official submittal to the Commission that will be formally evaluated and scored. Include all information necessary to adequately review the proposal, including all information requested in the pre-application comment letter to you. **Do not incorporate by reference information contained in the pre-application or in other materials.** The evaluation of the final application will be the basis for ranking projects for funding.

The **final application** must include the following:

Volume 1 (Separate Volume)

Section A: *General Information*

Section B: *Project Description, Goals, and Actions*

Section C: *Project Benefits to California*

Section D: *Project Tasks and Schedule*

Section E: *Project Management Structure and Personnel*

Section F: *Budget, Products and Due Dates*

Section G: *Certification, Authorization, and Resolution*

Volume 2 (Separate Volume)

Section H: *Confidential Products and Pre-existing Intellectual Property Lists* for Sections A-G: Submit Attachment H.1 to identify whether or not confidential information will be included in the application. Also, **if applicable**, submit Attachment H.1 and the confidential documents as a separately bound Volume 2.

Volume 3 (Separate Volume)

Section I: *Financial* (Private Entities Only)

Supporting Documents

Applicants must reference any necessary supporting documents in the appropriate application section **and** append these documents immediately behind the applicable section of the final application.

FINAL APPLICATION DUE DATE:

Send or deliver your final application in the required formats stated below to the following address on or before **April 6, 2004 at 4:00 p.m.**

**Geothermal Program
California Energy Commission
Grants and Loans Office
1516 9th Street, MS-1
Sacramento, CA 95814-5512**

Applicants are required to submit the final applications and all supporting documents in the formats as follows by the due date listed above:

Paper Original: One (1) signed paper original (signature in ink and clearly marked “original”)

- Volume 1 Sections A-G, and all supporting documents.
Exception: The resolution in Section G may be submitted at a later date, but must be provided prior to the execution of a funding agreement.
- Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).
- Volume 3 Section I (Private Entities Only).

Paper Copies: Ten (10) paper copies

- Volume 1 Sections A-G, and all supporting documents.
Exception: The resolution in Section G may be submitted at a later date, but must be provided prior to the execution of a funding agreement.
- Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).

Paper Copies: Three (3) paper copies

- Volume 3 Section I (Private Entities Only)

Electronic Copy: One (1) electronic copy on a 3.5” Disk, Zip Disk, or CD

- Volume 1 Sections A-F, and all supporting documents, including electronic version of graphs, tables, charts, maps, and pictures (Section G is not required to be submitted in electronic copy).
- Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).
- **Exception:** Volume 3 Section I is not required to be submitted in electronic copy.
- **Exception:** Supporting documents (references) and graphics not in electronic version are not required to be submitted in electronic copy.

Final Applications submitted by fax or e-mail will NOT be accepted.

Final applications that have not been received at the above listed location by April 6, 2004 at 4:00 p.m. will be rejected. With the exceptions stated above, the following must be submitted by the due date: One (1) paper original, ten (10) paper copies, and one (1) electronic copy of your final application, Volume 1 Sections A-G and Volume 2 Section H; and one (1) paper original and three (3) paper copies of Section I. Failure to provide the required original, copies, and electronic copy of your final application may be grounds for disqualification. Incomplete packages may be rejected.

How is the final application processed?

Final applications will be processed in the following phases:

- 1. Complete Final Application.** Commission staff will initially evaluate your final application for completeness. Complete final applications must include Volume 1 Sections A-G and Volume 2 Section H Attachment H.1. Also, if applicable, include Volume 2 Section H (including Attachment H.1 and confidential documents), and Volume 3 Section I. Commission staff will return incomplete applications with a letter of explanation.

If a demonstrated effort to complete all final application sections is ascertained from the information provided, the application will be permitted to proceed; however, the applicant may be contacted to provide omitted supporting information. To be considered, the requested information must be submitted promptly, prior to commencement of the final application review.

- 2. Scoring.** A Technical Advisory Committee using the scoring criteria shown below in Scoring Tables 1, 2, 3, or 4 will evaluate and score qualifying final applications. It is the applicant's responsibility to declare in the application which category the proposed project should be scored. Applicants should choose this category carefully as the applicant cannot change the category after the final application due date. Applicants should fully describe how their project would manifest the qualities listed as scoring criteria for the declared project category. Applicants should also fully describe how their project might address the geothermal problems, which are eligible to receive up to 30 points under the "Overriding Issues" scoring category. Private entities must pass a credit review and demonstrate sufficient financial strength to manage the project.

OVERRIDING ISSUES

Overriding issues are evaluated according to the degree to which the project addresses key problems facing the geothermal industry and/or is applicable to relevant goals and objectives stated in the *CEC Energy Action Plan* (available on the CEC website at www.energy.ca.gov). Additionally, points can be awarded for issues or benefits identified in the proposal but not otherwise considered in other criteria (e.g. projects addressing issues that corresponds with current state and federal collaboration efforts). The key problems for which overriding issues points may be awarded include, but are not limited to, the following:

- a) RD&D projects that lower the life-cycle cost of geothermal electricity generation including but not limited to:
 - Improving the efficiency and reducing the cost of resource exploration and assessment, permeability detection, mapping and well siting, resource drilling and well completion, power plant design and construction, environmental mitigation, reservoir monitoring, or power plant surface processing facilities;
 - Creating value-added products and revenue streams from geothermal power plants;

- Reducing operation and maintenance costs of wells (i.e. production and injection) and power plants.
- b) RD&D projects that lower the cost of enhanced geothermal systems by:
- Demonstrating and lowering the cost of extracting energy from resources of progressively lower permeability and fluid content or from lower temperature resources.
 - Investigating the extraction of fluids at higher energy densities (up to and including supercritical).
 - Using unproductive portions (low-permeability or fluid-depleted zones) of operating hydrothermal reservoirs as test beds for enhanced geothermal systems.
 - Investigating the potential of increasing generating capacities of existing geothermal power plants through wastewater injection.
 - Assessing high-temperature, non-hydrothermal resources suitable for development as enhanced geothermal systems.
- c) Projects that add-on to existing geothermal facilities, increasing the capacity. These projects include but not limited to:
- Improving dispatchability of geothermal power plants;
 - Flash/Binary hybrid configurations;
 - Hybrid configuration of water-cooled and air-cooled cooling towers.
- These existing facilities shall have the following characteristics:
- Sufficient T&D capacity to allow additional capacity;
 - Infrastructure already exists to lower costs of further development;
 - Lower costs, lower risk exploration attributes (shallower, known resources, etc.).
- d) Projects such as cascaded geothermal systems that take advantage of waste heat from new or existing facilities for additional electricity generation or direct use applications. These projects include:
- Power generation and direct use applications.
 - Hybrids configuration mentioned in (c) above.

3. Scoring Criteria. The following are scoring tables for GRDA resource development, planning, and mitigation projects, and PIER RD&D projects. Please see **Exhibits 1, 2, 3, and 4 for TAC Scoring Forms**, which provide detailed scoring criteria.

**SCORING TABLE 1:
GRDA RESOURCE DEVELOPMENT PROJECTS**

SCORING CRITERIA	120 ALLOTTED POINTS
Economic and Employment Benefits	15 points
Demonstration Value	15 points
Payback and Cost Effectiveness	15 points
Resource a. For all technologies other than closed loop GSHP systems: Proven extent of the resource; or b. For closed loop GSHP systems: Site characteristics and ground loop design	15 points
Likelihood of Success	15 points
Match Contribution	15 points
Overriding Issues	30 points

**SCORING TABLE 2:
GRDA PLANNING PROJECTS**

SCORING CRITERIA	120 ALLOTTED POINTS
Demonstrated Need	15 points
Stimulation of Geothermal Energy Development	15 points
Proven Extent of the Resource	15 points
Implementation	15 points
Public Involvement	15 points
Match Contribution	15 points
Overriding Issues	30 points

**SCORING TABLE 3:
GRDA MITIGATION PROJECTS**

SCORING CRITERIA	120 ALLOTTED POINTS
Documented Impact	15 points
Demonstrated Need	15 points
Availability of Alternatives to Mitigate the Impact	15 points
Timeliness	15 points
Likelihood of Success	15 points
Match Contribution	15 points
Overriding Issues	30 points

**SCORING TABLE 4:
PIER RD&D PROJECTS**

SCORING CRITERIA	120 ALLOTTED POINTS
Affordability: Improves Energy Cost/Value of California's electricity	10 points
Environmental: Reduces/Improves Environmental and/or Public Health Impacts	10 points
Reliability: Improvement in Reliability/Quality of California's electricity	10 points
Skill and Experience of Team	15 points
Economic Benefits: Direct Impacts on Local and State Economies	15 points
Cost Effectiveness of Project	10 points
Likelihood of Success and Market Connection	10 points
Match Contribution	10 points
Overriding Issues	30 points

Final scores will be the average of the scores awarded by the members of the Technical Advisory Committee (TAC). For an application to qualify for funding, **the average score must be a minimum of 80 out of 120 possible points.**

Applicant interviews with the TAC are an optional part of the final application process and will be scheduled by Commission staff as needed. The purpose of the interview is for final applicants to make a brief presentation of their project to TAC and answer questions.

- 4. Modifications.** With approval from the applicant, the TAC may modify the application's work statement, schedule, product description, or budget, but may not change the intent of the proposed project. Modifications may be made to:

- bring the costs of the project within the bounds of past and current projects of similar nature and extent;
- avoid duplication of work;
- divide the project into logical phases;
- reduce administrative requirements;
- include tasks necessary for project success; and/or
- shift funding among budget cost categories.

If such modifications are made, the TAC will re-score the application without requiring a re-submittal.

- 5. Commission Recommendation.** The Commission's RD&D Committee will consider all applications receiving a passing score from the Technical Advisory Committee. The RD&D Committee will recommend proposals for funding to the full Commission.

Commission staff will post the ranking by the RD&D Committee of successful final applicants on the Commission's Geothermal Program web site.

The Commission will consider the RD&D Committee's recommendations and vote to approve projects.

The Commission will send notices of approved projects to the Department of Finance, the Office of the Legislative Analyst, and the Joint Legislative Budget Committee for a 30-day review and comment period prior to execution of agreements.

Unsuccessful applicants may request a debriefing, provided that a written request is submitted within 30 days of the date of posting the ranking on the Commission's website.

- 6. Destruction of Applications.** Commission staff will destroy copies of applications and confidential information of all applications that are not approved after debriefings of final applicants are complete. Commission staff will retain the original and copies of the approved final applications and confidential information for the life of the project or as deemed necessary by Commission Legal Counsel.
- 7. Funding Agreement.** After all approvals are obtained, a funding agreement (see **Exhibit 5** for *GRDA Terms and Conditions* and **Exhibit 6** for *PIER Terms and Conditions*) will be developed by Commission staff for both the funding recipient and the Commission to sign. This agreement defines the work to be completed, the schedule, the budget, and the rights and obligations of the applicant and the Commission.

When can project work begin?

Generally, project work cannot begin until both the successful applicant and the Commission have signed the funding agreement. If the recipient must begin work prior to signing the funding agreement, the Energy Commission Project Manager may allow work to begin, but only after the Commission Business meeting date at which the project was approved. Requests to incur pre-award costs must be requested in writing by the recipient and authorization to begin work prior to funding agreement execution must be given in writing by the Commission Project Manager and prior to the recipient incurring expenditures in which the recipient will request Commission reimbursement.

Can this solicitation be modified or cancelled?

The Commission, the Geothermal Program, and/or the PIER Program reserves the right to do any of the following:

- Cancel the Program Opportunity Notice.
- Modify the Program Opportunity Notice and/or this *Application Manual*.
- Reject any or all applications received in response to the Program Opportunity Notice.

IV. Application Instructions

Introduction to the Application

Parts I, II and III of this *Application Manual* explains the processes for applying to the California Energy Commission's Geothermal Target Solicitation and provides useful information. **Please familiarize yourself with the processes and information before completing the application forms.**

Part IV includes application instructions for both the pre-application and the final application.

- The **pre-application** consists of Volume 1 Sections A-F and Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents).
- The **final application** consists of Volume I Sections A-G and Volume 2 Section H Attachment H.1. Also, if applicable, Volume 2 Section H (including Attachment H.1 and confidential documents), and Volume 3 Section I.
- Each Section instructions describe the information you need to provide and, where appropriate, "tips" to assist you in drafting your application. These tips are designed to give you insight into what types of information the Technical Advisory Committee uses to evaluate and score your application. Submit all application Sections in correct sequence with supporting information following immediately behind the appropriate Section. Provide clear and complete narratives and other documentation to enable efficient processing of your application.

Part V includes the application forms and/or narrative information that are to be completed for Sections A-I. The attached application forms are available as Microsoft Word or Excel files, and **can be downloaded from the Commission's Internet web site for contracts and funding opportunities at www.energy.ca.gov/geothermal**. Upon request only, staff can e-mail the application information or send a 3.5" floppy disk containing these files to you.

Part VI includes exhibits for additional solicitation information.

Application Instructions: Checklist

Use this checklist to ensure that you have completed all required sections.

PRE-APPLICATION:

Volume 1 (Separate Volume)

- ___ Section A: *General Information*-Attachment A.1 (All Applicants)
- ___ Section B: *Project Description Goals and Actions*-Attachments B.1, B.2 (All Applicants)
- ___ Section C: *Project Benefits to California*-Attachment C.1 (All Applicants)
- ___ Section D: *Project Tasks and Schedule*-Attachment D.1 (All Applicants)
- ___ Section E: *Project Management Structure and Personnel*-Attachment E.1 (All Applicants)
- ___ Section F: *Budget, Products and Due Dates*-Attachments F.1, F.2, F.3, F.4 (All Applicants)

Volume 2 (Separate Volume)

___ Section H *Confidential Products and Pre-existing Intellectual Property Lists*:
Submit Attachment H.1 to identify whether or not confidential information will be included in the application (All Applicants). Also, if applicable, submit Attachment H.1 and confidential documents as a separately bound volume 2. (Applicable Applicants)

FINAL APPLICATION:

Volume 1 (Separate Volume)

- ___ Section A: *General Information*-Attachment A.1 (All Applicants)
- ___ Section B: *Project Description Goals and Actions*-Attachment B.1, B.2 (All Applicants)
- ___ Section C: *Project Benefits to California*-Attachment C.1 (All Applicants)
- ___ Section D: *Project Tasks and Schedule*-Attachment D.1 (All Applicants)
- ___ Section E: *Project Management Structure and Personnel*-Attachment E.1 (All Applicants)
- ___ Section F: *Budget, Products and Due Dates*-Attachments F.1, F.2, F.3, F.4 (All Applicants)
- ___ Section G: *Certification, Authorization, and Resolution*
 - ___ *Applicant Category*-Attachment G.1 (All Applicants)
 - ___ *Certification*-Attachment G.2 (All Applicants)
 - ___ *Resolution A*-Attachment G.3 (All Local Jurisdictions)
 - ___ *Resolution B*-Attachment G.4 (All Private Entities not needing a Permit)
 - ___ *Resolution C*-Attachment G.5 (Resolution Approved by Applicants' Governing Authority)
 - ___ *Authorizing letter*-Attachment G.6 (All Private Entities)
 - ___ *Permits*-Attachment G.7 (All Private Entities needing a Permit)

Volume 2 (Separate Volume)

___ Section H *Confidential Products and Pre-existing Intellectual Property Lists*:
Submit Attachment H.1 to identify whether or not confidential information will be included in the application (All Applicants). Also, if applicable, submit Attachment H.1 and confidential documents as a separately bound Volume 2. (Applicable Applicants)

Volume 3 (Separate Volume)

- ___ Section I: *Financial*-Attachment I.1 (Private Entities Only)

Section A Instructions: *General Information*

All Applicants must complete the following attachment for the pre-application and the final application:

Attachment A.1 General Information

Attachment A.1 provides a brief single-page overview of your project. This attachment also provides the basic administrative information to facilitate communications with you.

- Complete the applicant and project information in the *General Information* format.
- The Commission (with the agreement of the applicant) reserves the right to change the type of funding assistance (grant versus loan) or project category if the Commission believes that the funding type being requested or the stated category is not appropriate based on the project being proposed.
- Minimum match contributions are: 50% for private entities; 50% for public entities in a "County of Origin" that has received more than \$50,000 in GRDA funds in each of the previous three years; and 20% for other public entities. Funding from other entities affiliated with the project can be counted toward match contribution.

Section B Instructions: *Project Description, Goals, and Actions*

All Applicants must complete the following attachments for the pre-application and the final application:

Attachment B.1 *Project Category*

Attachment B.2 *Narrative for Project Description, Goals, and Actions*

Attachment B.1 identifies your application project category for GRDA resource development, GRDA planning, GRDA mitigation, or PIER RD&D projects.

- Applicants must mark the applicable application project category in the *Project Category* format.

Attachment B.2 describes your project, explains the purpose or objective of the proposed project, elaborates on specific project goals, and specifies the actions you intend to take to reach these goals.

Your application should include well thought out and quantifiable goals that follow one another in a logical sequence and lead to project completion. Each goal should be followed by a description of discrete actions in a logical sequence which, when taken collectively, will cause each specific goal to be attained. Applicants whose projects are expected to result in energy cost savings and/or generate revenues must complete a cash-flow analysis. These projections must demonstrate the economic and financial viability of your project. In a narrative format, your application should:

- Provide a description on how your project addresses the appropriate scoring criteria found in Tables 1, 2, 3, or 4.
- Provide a detailed description of your project.
 - Describe the purpose of the proposed project.
 - Describe the need for the project.
 - Describe the major goals and actions to complete the project as well as the measurement and analysis you will complete to demonstrate project success.
 - Describe related activities occurring elsewhere.
 - Describe the status of California Environmental Quality Act (CEQA) compliance.
 - If appropriate, include a detailed schematic that includes mass and energy balances, component specifications for the system, a market assessment, and a business plan.
 - Include technical and economic feasibility studies as attachments that were prepared for the project.
 - For resource development projects that will directly result in revenues and/or energy cost savings, you must provide information that supports project feasibility. In your final application narrative, include at least:
 - 1) A summary of conclusions about the proposed project;
 - 2) A geothermal project description;
 - 3) If known, a discussion of the geothermal resource quality and availability, and note published information on fluid samples, temperature, and chemistry; and

- A schematic drawing including at least well location(s), distribution piping, structures, and major equipment and controls.
- For loans, applicants whose projects are expected to result in energy cost savings and/or will generate revenues must provide a cash-flow analysis. On a year-by-year basis, this analysis should include but not necessarily be limited to: 1) capital needs to augment cash on hand and differentiate between equity and borrowed capital; 2) fixed and variable expenses; 3) estimated and highlighted revenues or energy cost savings; 4) interest rates for project funds from sources other than the Commission; 5) depreciation type and rate; 6) project duration; 7) units sold and price(s) per unit; and 8) calculated levelized cost and rates of return. State other assumptions used in creating cash-flow projections.
- For those applicants requesting a loan, you must provide balance sheets and income statements and resulting comparative cash flows for the full term of the project co-funded by the Commission **and** also for the first five years of the repayment period.
- Attach an explanation of why you need Energy Commission funding and describe other funding sources you have applied for or considered applying for this project.

Tips for completing Attachment B.2. Does your application:

- Describe a project that is directly related to geothermal energy?
- Quantify realistic goals and actions including but not limited to cost and performance? State specific, measurable, and appropriate actions that will achieve each stated goal?
- If cash-flow estimates are applicable to the project, are present revenues and/or energy cost savings and all assumptions used in estimates included? Do the estimates use reasonable and commonly accepted assumptions as for other projects of this type?

Section C Instructions: *Project Benefits to California*

All Applicants must complete the following attachment for the pre-application and the final application:

Attachment C.1 Narrative for Project Benefits to California

Attachment C.1 provides a detailed discussion of the benefits of your project for the local community and California.

Your application should fully discuss short- and long-term benefits to the local community and the state. Discuss the merits of your project relative to the scoring criteria discussed in Scoring Tables 1, 2, 3, or 4 of the *Application Manual*. Applicants should fully describe how their project might address the geothermal problems eligible to receive up to 30 points under the “Overriding Issues” scoring category. In a narrative format, your application should address the appropriate scoring criteria found in Tables 1, 2, 3, or 4 and describe and quantify all project benefits, including whether your project will:

- Provide tangible benefits to the local community by mitigating negative impacts to air and water quality, ambient noise levels, wildlife, vegetation, and viewshed esthetics or improve public or employee health and safety.
- Provide tangible economic benefits by: 1) improving job opportunities, tax revenues, or other economic factors; and/or 2) stimulating small business competition (particularly in alternative energy development).
- Promote geothermal energy development or demonstration in California by creating a commercial product or process that will save energy or money or is a new way of using geothermal energy.
- Describe the anticipated effect of your project on geothermal energy development in the local geographical area and on California as a whole.
- Reduce the use of non-renewable energy resources by: 1) substituting geothermal for non-renewable energy resources; 2) increasing efficiency of geothermal energy use; and/or 3) shifting or leveling electricity loads to enable more efficient use of existing power plants and resources.
- Identify and describe all assumptions used to estimate benefits in the application.

Tips for completing Attachment C.1. Does your application:

- Identify and quantify benefits specific to California?
- Describe the anticipated effect of your project on geothermal energy development in the local geographical area and on California as a whole?
- Help remove technical, economic, environmental, and/or institutional barriers to geothermal energy use?
- Substantiate estimates of project-generated economic benefits and differentiate between short-term (e.g., construction) and long-term jobs created by the project?

Section D Instructions: *Project Tasks and Schedule*

All Applicants must complete the following attachment for the pre-application and the final application:

Attachment D.1 *Work Statement*

Attachment D.1 describes each project task, resulting products, the schedule for each task, and key personnel who are responsible for task completion. This task description is the basis for a work statement that will appear in the funding agreement between successful applicants and the Commission. This attachment includes pre-project and post-project tasks, where technical task and schedule information is needed.

In the *Work Statement* format, your application should describe each project task in numeric sequence. Major tasks should be divided into subtasks. You should include an administrative task for preparing required quarterly progress reports and the final administrative report. Information that must be added by the applicant is denoted in parentheses (e.g., <add information>). Each task description should have sufficient detail to explain the work to a lay reader and include the following:

- Task number.
- Task name and description (what you will do and how you will do it).
- When tasks will be completed and reported to the Commission (indicated by number of months counted from signing of funding agreement).
- Major products that will result from the task (test plan, blueprints, data, well completion, cascaded geothermal systems, etc.).
- Allocation of personnel and subcontractors assigned to the task.
- Critical project reviews. Critical project reviews are meetings between the recipient, the Commission Project Manager and other individuals selected by the Commission Project Manager to provide objective, technical support to the Commission. The purpose of these meetings is to discuss the status of the project and its progress toward achieving its goals and objectives. These meetings should occur after key tasks and may take place at the Commission offices in Sacramento or at another reasonable location determined by the Commission Project Manager.

Tips for completing Attachment D.1. Does your application:

- Show how the task objectives will effectively accomplish the stated goals?
- Reasonably budget project resources with respect to task sequence, task difficulty, and the use of labor, equipment, and facilities?
- Include technology transfer activities to help others use project results?

Section E Instructions: *Project Management Structure and Personnel*

All Applicants must complete the following attachment for the pre-application and the final application:

Attachment E.1 Project Management Structure and Personnel

Attachment E.1 describes the **key** personnel and contractors/subcontractors who are expected to complete the work on this project.

Your application should:

- In a narrative format, describe how your project team would be managed to ensure that the project would be completed on schedule and within budget.
- Provide an organization chart of the project team including reporting lines.
- Provide resumes of key project participants.
- In a narrative format, describe the rights and obligations of other sponsors and describe the qualifications of project contractors and subcontractors.

Tips for completing Attachment E.1. Does your application:

- Demonstrate through education and work experience your team's ability to complete the project's planning, scientific, and engineering work?
- Demonstrate an ability to keep the project within budget and on schedule?
- Identify your team?

Section F Instructions: *Budget, Products and Due Dates*

All Applicants must complete the following attachments for the pre-application and the final application.

Attachment F.1 *Summary Category Budget*

Attachment F.2 *Detail Category Budget*

Attachment F.3 *Task Budget*

Attachment F.4 *Products and Due Dates*

Attachments F.1, F.2, and F.3 provides a *Summary Category Budget*, a *Detail Category Budget*, and a *Task Budget* that shows how funding will be allocated between the budget categories, and the match share and Commission-funded parts of the project. This budget will appear in the funding agreement between the applicant and the Energy Commission.

Attachment F.4 provides a list of project *Products and Due Dates* by work statement tasks.

All budgeted costs should be based on actual costs while adhering to any specific limitations contained in **Exhibit 5 *GRDA Terms and Conditions***, **Exhibit 6 *PIER Terms and Conditions*** (**Exhibit 5**) and **Exhibit 7 *Summary of Allowable Travel and Per Diem Expenses***. The Commission will use the *GRDA or PIER Terms and Conditions, Allowable Travel and Per Diem Expenses*, and the appropriate OMB circular and/or Federal regulations to assist in determining whether certain costs are allowable. The Commission reserves the right to use as much or as little of each circular or regulations it deems necessary to administer the award in good faith and be consistent with prudent fiscal management of public funds.

- Provide a detailed budget of proposed expenditures. Funds must be used for projects described in the work statement. Please include all categories listed below, and only these categories in the following order. If your project has no budget in the category, list category and put "\$0" in the budget column.
- Complete the following budgets for both reimbursable and match-share expenditures for GRDA and PIER projects:
 - **Attachment F.1 *Summary Category Budget***
 - **Attachment F.2 *Detail Category Budget***
 - **Attachment F.3 *Task Budget***
 - **Attachment F.4 *Products and Due Dates***
- See the examples below: *Summary Category Budget* (**Example F.1**), *Detail Category Budget* (**Example F.2**), *Task Budget* (**Example F.3**), and *Products and Due Dates* (**Example F.4**).
- Your application must provide backup documentation (both reimbursable and match) describing how the project budget was derived, including a listing of:

- **PERSONNEL:** List job classification, hourly salary, number of hours to work on this project, and total cost. If employees are paid on a monthly versus hourly basis, provide monthly salary, percentage of time to be worked on this project, number of months to work on this project, and total cost.
- **FRINGE BENEFITS:** Specify percentage of Salaries and Wages and total cost.
- **TRAVEL:** List each trip (or category of trip), purpose of trip, itemization of costs, and cost per trip. Any trips that are not included in the grant budget will require prior written authorization from the Energy Commission Project Manager. **(See Exhibit 7 Summary of Allowable Travel and Per Diem Expenses.)**
- **EQUIPMENT:** Itemize with costs per item. This includes all equipment that will be directly purchased by the Recipient. “Equipment” means tangible non-expendable personal property having a useful life of more than one year and an acquisition cost of \$5000 or more per unit.
- **SUPPLIES:** Itemize with costs per item. This includes all supplies having a useful life of less than one year or an acquisition cost of less than \$5000 per unit that will be directly purchased by the Recipient. Similar items can be consolidated into subcategories.
- **CONTRACTUAL:** Specify the amount and purpose of each contract. (This would include contracts for the purchase and installation of equipment, etc.)
- **OTHER:** List any other items that do not fall in any of the above categories.
- **INDIRECT:** State the basis for the proposed indirect cost rates. Attach documentation of calculations. The Energy Commission Project Manager will review the indirect rate and documentation to support the rate. If a rate has been approved by a federal agency, the applicant should submit a copy of the approval.
- **MATCH CONTRIBUTIONS:** The nature, amounts, source, and status of the match contribution(s). If all or parts of matching funds are from outside sources, describe the degree of commitment of these funds (e.g., funding agreement is under review, preliminary acceptance of a funding agreement, or executed agreement). Briefly describe any conditions attached to your uses of these outside sources of funds. Specifically identify the sale or transfer of any technology or intellectual property rights associated with match-share funding. **Match share expenditures must occur within the grant or loan term.**

In addition:

- Identify and describe all assumptions used in developing the budget in the application.
- For GRDA loans, provide cash-flow analysis to demonstrate repayment at the requisite interest rate and term of repayment.

- **Statement of Need for Funding**

Attach an explanation of why you need Energy Commission funding and describe other funding sources you have applied for or considered applying for this project.

Tips for completing Attachments F.1, F.2, F.3, F.4. Does your application:

- Present reasonable and adequate cost estimates for identified categories?
- Meet match share requirements?
- Represent a reasonable funding request relative to your overall project?

Example F.1

SUMMARY CATEGORY BUDGET

STATE OF CALIFORNIA
SUMMARY CATEGORY BUDGET

CALIFORNIA ENERGY COMMISSION

Applicant:

Project Title:

<i>Budget Item</i>	<i>CEC Share</i>	<i>Match Share</i>	<i>Total Budget</i>
Personal Services:			
Personnel Direct Labor	61,800	61,800	123,600
Fringe Benefits (40% of Direct Labor)	24,720	24,720	49,440
Total Personal Services	86,520	86,520	173,040
Operating Expenses:			
Travel	857	857	1,714
Equipment	0	50,000	50,000
Supplies	1,250	1,250	2,500
Contractual (Sub-Contracts)	57,500	57,500	115,000
Other Operating Expenses	0	500	500
Total Operating Expenses	59,607	110,107	169,714
Indirect:			
Indirect Overhead (10% of Total Direct Costs)	0	34,275	34,275
G&A Overhead (Specify Rate and Basis)	0	0	0
Total Overhead	0	34,275	34,275
TOTAL BUDGET	146,127	230,902	377,029

Example F.2

DETAIL CATEGORY BUDGET

DETAIL CATEGORY BUDGET

Applicant:

Project Title:

<i>Budget Item</i>			<i>Energy Commission Share</i>	<i>Match Share</i>	<i>Total Budget</i>
Personnel:	<i>Hours</i>	<i>Rate</i>			
Name, Project Manager	1000	\$75	37,500	37,500	75,000
Name, Mechanical Engineer	800	\$40	16,000	16,000	32,000
Name, Technician	500	\$30	7,500	7,500	15,000
Name, Support Staff	80	\$20	800	800	1,600
Total Personnel Direct Labor			61,800	61,800	123,600
Fringe Benefits:					
FB 40% of Total Personnel Salaries		Total Fringe Benefits	24,720	24,720	49,440
Travel:					
4 trips to Sacramento for meetings (2 Staff Members); 10 trips to Sacramento project sites for site preparation and to monitor installation (2 Staff Members) @ 34 cents per mile @ approximately 160 miles per trip, and per diem		Total Travel	857	857	1,714
Equipment:	<i>Qty</i>	<i>Unit Cost</i>			
Dual Hose Dispenser	1 EA	\$30,000 EA	0	30,000	30,000
Single Hose Dispenser	1 EA	\$20,000 EA	0	20,000	20,000
Total Equipment			0	50,000	50,000
Supplies:	<i>Qty</i>	<i>Unit Cost</i>			
Electrical Wire	150 FT	\$10/FT	750	750	1,500
Small Tools	Variety	\$1,000	500	500	1,000
Total Supplies			1,250	1,250	2,500
Contractual (Sub-Contracts):					
Planning and Site Preparation			15,000	15,000	30,000
Equipment Installation Contract			40,000	40,000	80,000
Data Analysis Contract			2,500	2,500	5,000
Total Contractual			57,500	57,500	115,000
Other Operating Expenses:					
Permitting Fees		Total Other	0	500	500
Indirect:					
Indirect 10% of Total Direct Costs		Total Indirect	0	34,275	34,275
TOTAL BUDGET			146,127	230,902	377,029
			39%	61%	100%

Example F.3

TASK BUDGET

This Example F.3 only shows an example of the summary page for the *Task Budget*. Applicants are required to use Attachment F.3 to complete both the summary page and detail pages.

Summary Task Budget Applicant: Project Title:		<i>CEC Reimbursable Costs</i>	<i>Match Funds from Prime and Subs</i>	<i>Total Task Costs</i>	<i>CEC Percentage of Task Costs</i>
1.0	Project Start-Up Tasks				
Task 1.0 Total	1.1 Kickoff Meeting, 1.2 Document Matching Funds, 1.3 Identify Required Permits, 1.4 Obtain Required Permits	1,014	1,766	2,780	36%
2.0	Project Technical Activities				
Task 2.1 Total	Planning and Site Preparation Contract	35,261	42,313	77,574	45%
Task 2.2 Total	Equipment Installation Contract	94,943	168,932	263,875	36%
Task 2.3 Total	Data Analysis Contract	4,180	5,016	9,196	45%
	Technical Activity Subtotals	134,384	216,261	350,645	38%
3.0	Reporting Activities				
Task 3.1 Total	Quarterly Progress Reports	5,712	6,854	12,566	45%
Task 3.2 Total	Final Report	4,424	5,309	9,733	45%
Task 3.3 Total	Final Meeting	593	712	1,305	45%
	Reporting Activity Subtotals	10,729	12,875	23,604	45%
	Project Totals	Total CEC Cost	Total Match Funds	Total Project Cost	CEC % of Total Cost
		\$146,127	\$230,902	\$377,029	39%
		39%	61%	100%	

Example F.4

PRODUCTS AND DUE DATES

Applicant: _____
 Project Title: _____

Task Number	Task Name	Product(s)	Planned Start Date	Planned Completion Date
1.0	Project Start-Up Tasks			
1.1	Kick-Off Meeting	Kick-Off Meeting Presentation and Participation	8/1/04	8/1/04
		Written Documentation of Meeting Agreements	8/2/04	8/5/04
1.2	Document Match Funding	Cash/In-Kind Lists, Commitment Letters	8/1/04	8/30/04
1.3	Identify Required Permits	Permit Plan or No Permits Required Letter	8/1/04	8/15/04
1.4	Obtain Required Permits	Updated List of Permits, Copy of Approved Permits	8/1/04	8/30/04
2.0	Project Technical Activities			
2.1	Planning and Site Preparation Contract	Contractor Documents, Engineering Plans, Drawings, and Specifications	9/1/04	10/30/04
2.2	Equipment Installation Contract	Contractor Documents, Letter Report of Completed Equipment Installation	11/1/04	1/30/05
2.3	Data Analysis Contract	Contractor Documents, Quarterly Data Analysis Reports for One Year	2/1/05	1/15/06
3.0	Reporting Activities			
3.1	Quarterly Progress Reports	Quarterly Progress Reports (due the 15 th following the end of each calendar quarter)	10/15/04	1/15/06
3.2	Final Report			
3.2.1	Final Report Outline	Final Report Outline	2/1/06	2/10/06
3.2.2	Draft Final Report	Draft Final Report	2/11/06	3/15/06
3.2.3	Final Report	Final Report	4/16/06	6/15/06
3.3	Final Meeting	Final Meeting Presentation and Participation	6/30/06	6/30/06
		Written Documentation of Meeting Agreements	7/1/06	7/5/06

Section G Instructions: *Certification, Authorization, and Resolution*

All Applicants must complete the following applicable attachments for the final application only:

Attachment G.1 *Applicant Category* (All Applicants)

Attachment G.2 *Certification* (All Applicants)

Attachment G.3 *Resolution A* (All Local Jurisdictions)

Attachment G.4 *Resolution B* (All Private Entities not needing a Permit)

Attachment G.5 *Resolution C* (Resolution Approved by your Governing Authority)

Attachment G.6 *Authorizing Letter* (All Private Entities)

Attachment G.7 *Permits* (All Private Entities needing a Permit)

Attachment G.1

- All Applicants must mark the applicable applicant category in the *Applicant Category* format, and submit the required attachments for your status (Local Jurisdiction/Public Entity or a Private Entity)

Attachment G.2

- All Applicants must complete the certification information in the *Certification* format, and the Authorized Representative must sign the certification.
- For a Local Jurisdiction, the Authorized Representative must be the person designated in their Governing Body's resolution. For a Private Entity, the Authorized Representative must be the President, Owner, General Partner or authorized (by original signed letter) designee.

Attachments G.3, G.4, G.5

- All Applicants must complete the applicable Resolution A, B, or C in the applicable *Resolution* format for your status, and it must be approved with a signature by your Governing Authority.
- At a minimum, we need the following in the applicable authorizing *Resolution*:
 - Brief description of the project.
 - Acceptance of award up to \$ (specific dollar amount).
 - Authorization of a person, by title, or authorized designee, empowered to execute agreement and all future documents related to this award.
 - *Resolution* approved by your Governing Authority with a signature.

Attachment G.6

- In a letter format, all Private Entities must provide an *Authorizing Letter*.
- At a minimum, we need the following in the *Authorizing Letter*:
 - Authorization of a person, by title and company name, or authorized designee, authorized to submit the application, and empowered to execute all necessary contracts, agreements, amendments and payment requests pertaining to its implementation.
 - *Authorizing Letter* approved by your Authorized Representative with a signature.

Attachment G.7

- All Private Entities must provide a list of permit(s) information.
- List any local jurisdiction permits required to initiate, complete, and/or operate any aspect of your project. Describe the status of permit(s) as of the date of application (preparing application, being reviewed, approved, etc.).

Section H Instructions: *Confidential Products and Pre-existing Intellectual Property Lists*

All Applicants must complete the following attachment for the pre-application and the final application:

Attachment H.1 *Confidential Products and Pre-existing Intellectual Property Lists* (Confidential)

Attachment H.1

- All Applicants must identify whether or not confidential information will be included in the application in the *Confidential* format.
- Also, if applicable, submit Attachment H.1 and the confidential information as a separately bound Volume 2 Section H. The following are specific instructions to submit confidential information:

Instructions for Attachment H.1 *Confidential Products and Pre-existing Intellectual Property Lists*

In the event the Applicant feels the project will include information claimed as confidential in a product and shall be listing pre-existing intellectual property items, then please read the following instructions carefully before completing Attachment H.1. The information provided by the Applicant will help the Commission in making a determination as to whether or not a confidential designation will be needed or allowed.

PART I: CONFIDENTIAL PRODUCTS

1. Please check the appropriate box, either that there are or are not confidential proposal documents submitted with the application or confidential project products to be submitted as part of this Agreement. If there are, please adhere to the following instructions.
2. **What is NOT a proper basis for confidential designation?**
 - Scope of Work (including task descriptions, schedule of products, due dates)
 - Proposed budgets
 - DVBE information
 - Names of employees, subcontractors and match fund participants
 - Test plans and reports
 - Progress reports
 - Final reports

3. What is the proper basis for confidential designation?

A. Patent application number:

- The number will not be put in the agreement, only a reference to “patent application.”
- The Applicant must submit the patent application number, which will be kept in a confidential file, to the Commission.
- Information already patented does not need confidential designation.

B. Trade Secrets, there are four types of trade secrets typically relevant to GRDA or PIER agreements:

- Technical trade secrets
(i.e., technical drawings or description of technology not patented);
- Business trade secrets
(i.e., energy use data for an individual facility; pending strategic partnership with a manufacturer);
- Marketing trade secrets
(i.e., market projections or strategies);
- Economic/financial trade secrets
(i.e., product price and cost flow projections).

4. Complete the Chart Below

Three types of information must be provided for confidential products: "Description of Information to be Kept Confidential," "Legal Basis for Confidential Designation," and "Term of Confidentiality."

A. Description of Information to be Kept Confidential

- Describe the technology in general terms that can be included in the agreement, which is a public document. Be specific enough to describe what needs to be kept confidential, without disclosing information that is a trade secret. Also include a description of any report/document that contains the trade secret, and the date of the document, if applicable.

B. Legal Basis for Confidential Designation

- Choose the appropriate legal basis (please see the example below).

C. Term of Confidentiality

- In general, the term of confidentiality is through the end term of the agreement. If the Applicant wants a longer term, the Applicant must identify a reason. In cases where a patent application is involved, the term is usually 3 years from the effective date of the agreement.

EXAMPLE:

Description of Information to be Kept Confidential: <ul style="list-style-type: none"> • Title of document/name of product • Date of document, if applicable • Task Number • Portion of document to be kept confidential • General description of the technology to be kept confidential 	Legal Basis for Confidential Designation: <ul style="list-style-type: none"> • Patent application number • Trade Secret <ul style="list-style-type: none"> --Technical --Business --Marketing --Economic/Financial 	Term of Confidentiality: <ul style="list-style-type: none"> • Through end term of agreement. • For patent application numbers, 3 years from effective date of agreement.
<ul style="list-style-type: none"> • Confidential Technical Challenges Report • Date n/a • Task 4 • Entire document • Applicant is attempting to improve the efficiency and lower the cost of natural-gas-fired absorption chillers used to cool commercial buildings. This project will develop and test metal coatings, which are applied to low-cost steels to resist brine-caused corrosion. If effective, these coatings can make low-cost steels corrosion resistant, and absorption chiller components can be made of them, thereby lowering their cost. Energy efficiency would be improved by operating the chiller at high temperatures without risk of component corrosion. 	<i>The Commission determines that the report constitutes technical trade secrets, disclosure of which would deprive Applicant of its competitive advantage.</i>	The term of confidentiality will last through the end term of the agreement (March 31, 2007).
<ul style="list-style-type: none"> • Patent application number 	Patent application number	The term of confidentiality will last for three years from the effective date of this agreement (July 1, 2006) by which time it is presumed that Applicant will have perfected its rights through the United States Patent Office.

PART II: PRE-EXISTING INTELLECTUAL PROPERTY

1. Please check the appropriate box, either that there is or is not pre-existing intellectual property as part of this Agreement. If there is, please adhere to the following instructions.
2. List intellectual property belonging to the prime Applicant and all subcontractors that existed before Commission funding begins.
3. List only intellectual property that will actually be used in performing the agreement. Do not list patents or trade secrets that are irrelevant to this agreement.
4. The reason for including this list is to determine royalty obligations. Royalty payments are triggered for technology that is sold only for the portion of the technology developed with Commission funds. If the technology used pre-existing intellectual property, then royalty obligations are not triggered.

EXAMPLES:

Patents Issued

Title	Patent Number	Inventor/Assignee (Owner)	File Date	Issue/Grant Date	Country	Public Description
Blue Light Emitting Diode Formed in Silicon Carbide	4,918,497	Cree Research, Inc.	12/14/88	4/17/90	USA	A light emitting diode formed in silicon carbide that emits visible light having a wavelength of between about 475-480 nanometers, or between about 455-460 nanometers, or between about 424-428 nanometers.

Patent Application*

Title	File Date	Public Description (2-3 sentences)
Optimal Portfolio Methodology for Assessing Distributed Energy Resources Benefits to the EnergyNet	9/1/02	This methodology has been developed as a detailed work plan for a demonstration based on the use of data for the SVP T&D network along with GE PSLF and Optimal's Aempfast system analysis packages. The work performed under this agreement represents the first demonstration and use of this methodology.

*For Patent Application numbers submitted as a confidential product, please see instructions for confidential products.

Trade Secret

Title	Public Description (2-3 sentences)
Advanced Energy Management and Power Flow Analysis Systems Technology (Aempfast)	Aempfast consists of various software and hardware technologies, algorithms, and processes for optimization and analysis of electric power systems, which are complex, non-linear networks. Aempfast provides a set of power optimization and management tools that intelligently and simultaneously solve for competing objectives in the planning and operation of any power grid. There are diverse analytical features in Aempfast that can be used to address and apply many different constraints on a network, including both “equality constraints” and “inequality constraints,” while optimizing the subject network.

Copyright

Title	Copyright Number	Owner	File Date	Issue/Grant Date	Country	Public Description
RL23 Design Software	554455	Widgets R Us, Inc.	9/1/98	12/20/00	Canada	Software for design and customization of commercial water heating units in multiple story buildings

Trademark

Title	Trademark Number	Owner	File Date	Issue/Grant Date	Country	Public Description
ENERGY STAR®	1999485	Environmental Protection Agency, Federal Agency, United States	4/12/95	9/10/96	USA	Typed drawing, service mark.

Disclosure Memos

Title	Disclosure Date	Memo Number, if Applicable	Public Description (2-3 sentences)
Reactor for converting hydrocarbon fuels to hydrogen	3/3/01	37654-2	Apparatus for utilization of the unmixed reforming process for the production of high purity hydrogen from diesel or strategic fuel. This invention will lock in the key design features needed for application of unmixed reforming to onboard applications such as automobiles or transportable power sources.

Invention Berkeley (DOE National Labs Only)

Title	Number	Date
Manufacturing Energy Efficient Roofing Tiles	IB 1723	9-20-89

Section I Instructions: *Financial* (Private Entities Only)

Only Private Entity Applicants must complete the following attachment for the final application only:

Attachment I.1 *Financial* (Private Entities Only)

Attachment I.1 provides additional information to demonstrate sufficient financial resources to support completion of a Commission co-funded project and financial ability to complete the implementation of the results of this project. Your income tax returns, financial statements, and credit reports will remain confidential. If your application is not approved, Commission staff will destroy your application and confidential information after debriefings for final applicants are complete. If your application is approved, unless available in the public domain elsewhere, tax returns and financial statements will remain confidential. Commission staff will retain the original and copies of the approved final applications and confidential information for the life of the project or as deemed necessary by Commission Legal Counsel.

- Complete the all the applicant information and business information in the *Financial* format, and provide the required financial documents.
- Certain entities such as corporations, limited partnerships/limited liability companies may be required to register and be in good standing with the California Secretary of State to be eligible to enter into a funding agreement with the Energy Commission. If you are not registered with the California Secretary of State, we encourage you to contact their office at www.ss.ca.gov or (916) 653-6814 as soon as possible to avoid potential delays in beginning your project should you be awarded funding.

- **Collateral Information: (only for private entity applicants applying for a loan)**

All loan awards must be fully collateralized within 60 days after the date the Commission approves the funding award or the award may be cancelled at the Commission's discretion. The Commission's Grants and Loans Office must approve the collateral. Collateral will consist of California real property, equipment financed by the loan award, other business assets, and personal assets of project principals and guarantors. See **Exhibit 8 Security Checklist**, which outlines the minimum requirements for typical collateral types. The Commission reserves the right to accept or reject any offered collateral. Collateral will be discounted per the guidelines specified in **Exhibit 8 Security Checklist**. Provide full details of all collateral offered to secure 100 percent of the requested loan amount.

V. Application Forms

Section A	Attachment A.1: <i>General Information</i>
Section B	Attachment B.1: <i>Project Category</i>
Section B	Attachment B.2: <i>Narrative for Project Description, Goals, and Actions</i>
Section C	Attachment C.1: <i>Narrative for Project Benefits to California</i>
Section D	Attachment D.1: <i>Work Statement</i>
Section E	Attachment E.1: <i>Project Management Structure and Personnel</i>
Section F	Attachment F.1: <i>Summary Category Budget</i>
Section F	Attachment F.2: <i>Detail Category Budget</i>
Section F	Attachment F.3: <i>Task Budget</i>
Section F	Attachment F.4: <i>Products and Due Dates</i>
Section G	Attachment G.1: <i>Applicant Category</i>
Section G	Attachment G.2: <i>Certification</i>
Section G	Attachment G.3: <i>Resolution A</i>
Section G	Attachment G.4: <i>Resolution B</i>
Section G	Attachment G.5: <i>Resolution C</i>
Section G	Attachment G.6: <i>Authorizing Letter</i>
Section G	Attachment G.7: <i>Permits</i>
Section H	Attachment H.1: <i>Confidential Products and Pre-existing Intellectual Property Lists</i>
Section I	Attachment I.1: <i>Financial (Private Entities Only)</i>

VI. Exhibits

Exhibit 1: *TAC Scoring Form—GRDA Resource Development Project*

Exhibit 2: *TAC Scoring Form—GRDA Planning Project*

Exhibit 3: *TAC Scoring Form—GRDA Mitigation Project*

Exhibit 4: *TAC Scoring Form—PIER RD&D*

Exhibit 5: *GRDA Terms and Conditions*

Exhibit 6: *PIER Terms and Conditions*

Exhibit 7: *Summary of Allowable Travel and Per Diem Expenses*

Exhibit 8: *Security Checklist*

Section A. Application Attachment A.1: *General Information*

All Applicants are required to complete Attachment A.1 for the pre-application and the final application.

Application Date: _____

Request Funding as (check one):

_____ GRDA Grant
_____ GRDA Loan

_____ PIER Grant

Project Category (check one):

_____ GRDA Resource Development
_____ GRDA Geothermal Planning
_____ GRDA Mitigation

_____ PIER Research, Development, and Demonstration

The Commission (with the agreement of the applicant) reserves the right to change the type of funding assistance (grant versus loan) or project category if the Commission believes that the funding type being requested or the stated category is not appropriate based on the project being proposed.

Applicant is (check one):

_____ Public Entity (*not* in "County of Origin")
_____ Public Entity (within a "County of Origin")
_____ Public/Private Partnership
_____ Private For-Profit Company

_____ Private Individual
_____ Local Jurisdiction
_____ Other

If County of Origin, list County: _____

If County of Origin, list:

Geothermal Resources Development Account funds received:

2003:	\$ _____	County of Origin:	_____
2002:	\$ _____	County of Origin:	_____
2001:	\$ _____	County of Origin:	_____

Applicant (Company Name) _____
Project Title _____
Mailing Address _____
Street Address _____
E-mail Address _____

Project Director _____ Title _____ Telephone # _____
Mailing Address _____

Project Manager _____ Title _____ Telephone # _____
Mailing Address _____

Budget Officer _____ Title _____ Telephone # _____
Mailing Address _____

Number of Months Required to Complete Project (**Maximum of 42 months**):

Energy Commission Funds Requested:	\$	=	%	Of Total Project Budget
Match Contribution by Applicant: ¹	\$	=	%	Of Total Project Budget
Total Project Budget:	\$			

Source of Match Funds: _____

² Minimum match contributions are: 50% for private entities; 50% for public entities in a "County of Origin" that has received more than \$50,000 in GRDA funds in each of the previous three years; and 20% for other public entities. Funding from other entities affiliated with the project can be counted toward match contribution.

Abstract of the Project (one paragraph):

Applicant Signature: _____ Date: _____

Section B. Application Attachment B.1: *Project Category*

All Applicants are required to complete Attachment B.1 for the pre-application and the final application.

Mark your project category:

☐ **GRDA Resource Development Projects:** Undertaking development and demonstration projects relating to geothermal resource assessment and exploration, and direct-use and electric generation technology, including undertaking projects demonstrating the technical and economic feasibility of geothermal direct heat and electrical generation applications.

☐ **GRDA Power Production:**

- ☐ **Resource/Reservoir Assessment, Evaluations, Explorations**
- ☐ **Well Drilling (Includes the Several Well Types and Exploration Drilling)**
- ☐ **Drilling Method, Hardware**
- ☐ **Resource Management**
- ☐ **Electricity Production**

☐ **GRDA Direct Uses**

☐ **GRDA Geothermal (Ground Source) Heat Pumps**

☐ **GRDA Other (Specify):** _____

☐ **GRDA Geothermal Planning Projects:** Local and regional planning and policy development and implementation necessary for compliance with programs required by local, state, or federal laws and regulations, including preparation or revision of geothermal resource elements, or geothermal components of energy elements, for inclusion in the local general plan, zoning and other ordinances, and related planning and environmental documents.

- ☐ **GRDA Feasibility/Marketing Studies**
- ☐ **GRDA Project Planning (Including Environmental Planning), Document Preparation**
- ☐ **GRDA Other (Specify):** _____

☐ **GRDA Mitigation Projects:** Identification of feasible measures that will mitigate the adverse impacts of the development of geothermal resources, environmental enhancement, and the adoption of ordinances, regulations, and guidelines to implement those measures, including:

- Collecting baseline data and conducting environmental monitoring.
- Administrative costs incurred by the local jurisdiction that is attributable to the development or production of geothermal resources.
- Monitoring and inspecting geothermal facilities and related activities to assure compliance with applicable laws, regulations, and ordinances.
- Identifying, researching, and implementing feasible measures that will mitigate the adverse impacts of that development or production.

- Planning, constructing, providing, operating, and maintaining those public services and facilities that are necessitated by and result from the development or production.
- Undertaking projects for the enhancement, restoration, or preservation of natural resources, including, but not limited to, water development, water quality improvement, fisheries enhancement, and park and recreation facilities and areas.

☐ **GRDA Environmental Impacts Reduction Enhancements**
☐ **GRDA Social (Including Safety) and Economic Impacts Reduction**
☐ **GRDA Other (Specify):** _____

☐ PIER RDD Projects:

Undertaking geothermal research, development, and/or demonstration project that addresses a significant California energy problem and provides a clear potential benefit to California electricity ratepayers. For example, your project may enhance the competitiveness of and promote the use of geothermal energy by focusing on one or more of (but not limited to) the following:

- Lowering the risks and associated costs of developing geothermal resources. These cost will be lowered by finding improvements in the ways to reduce the costs of exploration, drilling and completing geothermal wells; improving the understanding of basic geological conditions associated with hydrothermal systems; and enhancing reservoir management.
- Reducing the cost of producing geothermal power. These cost will be lowered by developing perhaps a new generation of binary geothermal turbines with improved thermodynamic efficiency, advanced heat rejection systems, and considerable reduction in equipment and construction costs;
- Developing other sources of revenues such as value-added products, mineral recovery, and cascaded use of heat;
- Investigating and developing small-modular and possibly hybrid geothermal facilities for load following and peaking applications.

PIER Power Production:

☐ **Resource/Reservoir Assessment, Evaluations, Explorations**
☐ **Well Drilling (Includes the Several Well Types and Exploration Drilling)**
☐ **Drilling Method, Hardware**
☐ **Resource Management**
☐ **Electricity Production**

☐ **PIER Other (Specify):** _____

Section B. Application Attachment B.2:

Narrative for Project Description, Goals, and Actions

All Applicants are required to complete Attachment B.2 for the pre-application and the final application.

Section C. Application Attachment C.1:

Narrative for Project Benefits to California

All Applicants are required to complete Attachment C.1 for the pre-application and the final application.

Section D. Application Attachment D.1: *Work Statement*

All Applicants are required to complete Attachment D.1 for the pre-application and the final application.

Work Statement

<Insert Applicant Company Name>
<Insert Project Title>

OVERALL PROJECT GOAL

<Describe the overall goals of the project>

TECHNICAL AND ECONOMIC PERFORMANCE OBJECTIVES

The specific technical objectives of this project are:

-

The specific economic objectives of this project are:

-

1.0 PROJECT START-UP TASKS

TASK 1.1 Attend Kick-Off Meeting

The Recipient shall attend a “kick-off” meeting with the Commission Project Manager and the Grants and Loans Analyst to review:

1. The Commission's expectations for accomplishing tasks described in the Work Statement
2. The administrative requirements in the Terms and Conditions of the funding agreement (invoicing, prior approvals, data disclosure limitations, progress reporting format and content, etc.)
3. The Commission's roles and responsibilities.

The Commission Project Manager shall designate the location of this meeting.

Product Description:

- Kick-Off Meeting Agenda

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- N/A

TASK 1.2 Document Matching Funds

The Recipient shall provide documentation of match fund commitments to the Commission Project Manager. Before funds under this funding agreement are disbursed, the Recipient must receive written approval of match fund commitment from the Commission Project Manager.

The Recipient shall provide the following information about the match funding to be used to conduct this project:

1. Amount and source of each **cash** match funding, including a contact name, address and telephone number.
2. Description, documented market or book value, and source of each in-kind contribution, including a contact name, address and telephone number. If the in-kind contribution is equipment or other personal property, or real property, the recipient shall identify its owner and provide a contact name, address and telephone number, and the address where the property is located.
3. Written commitment from each source of cash match funding or in-kind contributions that these funds or contributions have been secured or will be secured prior to the date(s) when the funds or in-kind contributions are required for project expenditures.

The Recipient need not resubmit this information if it was provided in the recipient's application and the information submitted is still valid. The Recipient, however, shall assist the Commission Project Manager in locating this proposal information, upon request.

Product Description:

- Written documentation of match funds or written letter declaring that there have been no changes in match funds (list match funds).
- Written documentation of changes in match funds as they occur.

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for task>

TASK 1.3 Identify Required Permits

Before any costs are incurred for which state-fund reimbursement will be requested under this funding agreement, the Recipient shall prepare and submit to the Commission Project Manager a list of all permits required for construction and/or operation of equipment or the project facility, the name, address and telephone number of the permitting jurisdictions or lead agencies, and the schedule the Recipient will follow in applying for and obtaining these permits. If permits are not required to conduct this project, the recipient shall state this finding in writing to the Commission Project Manager.

Product Description:

- <list of permits and schedule>

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for task>

TASK 1.4 Obtain Required Permits

The Recipient shall submit written certification that the recipient has received all necessary and required permits to the Commission Project Manager, including California Environmental Quality Act compliance (CEQA) to construct, operate, or test the proposed equipment or facility as soon as they are received.

Product Description:

- Written Certification.

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for task>

TECHNICAL TASKS

The project's work scope involves the following technical tasks:

TASK <insert task number> <insert task title>

Critical Project Reviews

The Commission will conduct critical project reviews at the conclusion of the following tasks:

TASK <insert task number> <insert task title>

Critical project reviews are meetings between the recipient, the Commission Project Manager, the Commission Program Manager, and other individuals selected by the Commission Project Manager to provide objective, technical support to the Commission. The purpose of these meetings is to discuss the status of the project and its progress toward achieving its goals and objectives. These meetings may take place at the Commission offices in Sacramento or at another reasonable location determined by the Commission Project Manager.

Prior to this critical project review meeting, the Recipient shall provide the task product(s) to the Commission Project Manager sufficiently in advance to allow the Project Manager's review of the

product document(s) before the review meeting. If not already defined in the Work Statement, the Commission Project Manager shall specify the contents of the deliverable product(s).

At the critical project review meeting, the Recipient shall present the required technical information and participate in a discussion about the project with the Commission Project Manager and other meeting attendees, if any.

Following that meeting, the Commission Project Manager will determine whether the Recipient is complying satisfactorily with the Work Statement and whether the project is demonstrating sufficient progress toward achieving its goals and objectives to warrant continued financial support for the project. If the Commission Project Manager concludes that satisfactory progress is *not* being made, this conclusion will be referred to the Commission's Research, Development and Demonstration Policy Committee for its concurrence. As an outcome of each critical project review, the Commission Project Manager will provide a written response to the Recipient indicating his or her conclusions about the project to date. If appropriate, a written response from the Commission's Grant Officer may direct the Recipient to not proceed with a specific task or to stop work.

2.0 TECHNICAL TASK DESCRIPTIONS

The Recipient will perform the following technical tasks:

TASK 2.1 <Title>

<Describe the goal and the actions to be taken under the task>

The Recipient with assistance from the key subcontractors shall:

-

Product Description:

- <list of products from the tasks>

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for task>

Subtask 2.1.1 <Title>

<Describe the goal and the actions to be taken under the subtask>

The Recipient with assistance from the key subcontractors shall:

-

Product Description:

- <list of products from the subtasks>

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for subtask>

3.0 REPORTING TASKS

The Recipient shall adhere to all Report Standards that appear in the funding agreement.

TASK 3.1 Quarterly Progress Reports

The Recipient shall prepare **written** Quarterly Progress Reports and submit them to the Commission Project Manager, starting after the funding agreement approval date and shall continue each following quarter until the Final Report has been accepted by the Commission Project Manager. The **GRDA** and **PIER Terms and Conditions** each provide the requirements for the Quarterly Progress Reports.

Product Description:

- Quarterly Progress Reports are due the 15th following the end of a calendar quarter.

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for task>

TASK 3.2 Final Report

The Final Report shall be a public document. If the Recipient has obtained confidential status and will be preparing a confidential version of the final report as well, the Recipient shall perform the following tasks for both the public and confidential versions of the Final Report.

Subtask 3.2.1 Final Report Outline

The Recipient shall prepare and submit to the Commission Project Manager for review an outline of the Final Report describing the original purpose, approach, results, and benefits of the project.

The outline shall be submitted to the Commission Project Manager who shall determine if the outline is satisfactory. If the Commission Project Manager determines that the outline is unsatisfactory, he or she will, in a timely manner, provide the recipient written comments which indicate how the outline can be improved. The recipient shall revise the outline to meet the Commission Project Manager's requirements. Upon finding the final report outline satisfactory, the Commission Project Manager shall provide written approval to the recipient.

Product Description:

- Final Report Outline

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for subtask>

Subtask 3.2.2 Draft Final Report for Comment

The Recipient shall prepare and submit to the Commission Project Manager a draft Final Report on the project. The format of the report shall follow the approved outline.

The draft final report shall be submitted to the Commission Project Manager for review and approval. If the Commission Project Manager determines that it is unsatisfactory, he or she will provide to the recipient in a timely manner written comments which indicate how it can be improved. The Recipient shall revise the draft final report incorporating the Commission Project Manager's corrections and required changes. Upon finding the revised draft to be satisfactory, the Commission Project Manager shall provide to the recipient written approval.

Product Description:

- Draft Final Report

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for subtask>

Subtask 3.2.3 Final Report

The Recipient shall prepare the Final Report and submit it to the Commission Project Manager after receiving the Commission Project Manager's written approval of the draft Final Report. This task shall be deemed complete and accepted by the Commission only when the Commission Project Manager (with the consent of the Commission Program Manager) approves the Final Report in writing. Upon approval, the recipient shall submit two unbound copies of the Final Report to the Commission Project Manager.

Product Description:

- Final Report

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for subtask>

TASK 3.3 Final Meeting

The Recipient shall meet with the Commission Project Manager and the Commission Program Manager to present findings, conclusions, and any closeout items.

Product Description:

- N/A

Due Date:

- <months from executed Commission Funding Agreement>

Key Personnel and Subcontractors:

- <list of personnel/subcontractors responsible for task>

Section E. Application Attachment E.1:

Project Management Structure and Personnel

All Applicants are required to complete Attachment E.1 for the pre-application and the final application.

Section F. Application Attachment F.1: *Summary Category Budget*

All Applicants are required to complete Attachment F.1 for the pre-application and the final application.

Applicant:

Project Title:

<i>Budget Category Item</i>	<i>CEC Share</i>	<i>Match Share</i>	<i>Total Budget</i>
Personal Services:			
Personnel Direct Labor			0
Fringe Benefits			0
Total Personal Services	0	0	0
Operating Expenses:			
Travel			0
Equipment			0
Supplies			0
Contractual (Sub-Contracts)			0
Other			0
Total Operating Expenses	0	0	0
Indirect:			
Indirect Overhead			0
G&A Overhead			0
Total Overhead	0	0	0
TOTAL BUDGET	0	0	0

Section F. Application Attachment F.2: Detail Category Budget

All Applicants are required to complete Attachment F.2 for the pre-application and the final application.

Applicant: _____

Project Title: _____

<i>Budget Category Item</i>	<i>CEC Share</i>	<i>Match Share</i>	<i>Total Budget</i>
Personnel:			
Name, Title Hours Rate	0	0	0
Name, Title Hours Rate	0	0	0
Total Personnel Direct Labor	0	0	0
Fringe Benefits:			
____% of Personnel Direct Labor Total Fringe Benefits	0	0	0
Travel:			
number of trips, location and purpose	0	0	0
.34 cents per mile at approximately ____ miles per trip			
Total Travel	0	0	0
Equipment:			
<i>Qty Unit Cost</i>			
Item Qty Unit Cost	0	0	0
Item Qty Unit Cost	0	0	0
Total Equipment	0	0	0
Supplies:			
<i>Qty Unit Cost</i>			
Item Qty Unit Cost	0	0	0
Item Qty Unit Cost	0	0	0
Total Supplies/Materials	0	0	0
Contractual (Sub-Contracts):			
SubContractor and Purpose	0	0	0
SubContractor and Purpose	0	0	0
Total Contractual	0	0	0
Other:			
Item	0	0	0
Item	0	0	0
Total Other	0	0	0
Indirect:			
Indirect Overhead ____% of ____	0	0	0
G&A Overhead ____% of ____	0	0	0
Total Indirect	0	0	0
TOTAL BUDGET	0	0	0

Section F. Application Attachment F.3: Task Budget

All Applicants are required to complete Attachment F.3 for the pre-application and the final application.

NOTE: Do NOT fill in this spreadsheet.					
All data are transferred from other spreadsheets in this Excel workbook.					
Summary Task Budget		CEC Reimbursable Costs	Match Funds from Prime & Subs	Total Task Costs	CEC Percentage of Task Costs
Applicant:					
Project Title:					
1.0 Project Start-Up Tasks					
Task 1.0 Total	1.1 Kickoff Meeting, 1.2 Document Matching Funds, 1.3 Identify Required Permits, 1.4 Obtain Required Permits	0	0	0	NA
2.0 Project Technical Activities					
Task 2.1 Total		0	0	0	NA
Task 2.2 Total		0	0	0	NA
Task 2.3 Total		0	0	0	NA
Task 2.4 Total		0	0	0	NA
Task 2.5 Total		0	0	0	NA
Task 2.6 Total		0	0	0	NA
Task 2.7 Total		0	0	0	NA
Task 2.8 Total		0	0	0	NA
Task 2.9 Total		0	0	0	NA
Task 2.10 Total		0	0	0	NA
Task 2.11 Total		0	0	0	NA
Task 2.12 Total		0	0	0	NA
Technical Activity Subtotals		0	0	0	NA
3.0 Reporting Activities					
Task 3.1 Total	Quarterly Progress Reports	0	0	0	NA
Task 3.2 Total	Final Report	0	0	0	NA
Task 3.3 Total	Final Meeting	0	0	0	NA
Reporting Activity Subtotals		0	0	0	NA
Project Totals		Total CEC Cost	Total Match Funds	Total Project Cost	CEC % of Total Cost
		0	0	0	NA

Detailed Task Budgets

Applicant:			
Project Title:			
Start-up Task 1.0			
1.1 Kickoff Meeting, 1.2 Document Matching Funds, 1.3 Identify Required Permits, 1.4 Obtain Required Permits	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
TOTALS for Task 1.0	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.1			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
TOTALS for Task 2.1	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.2			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.2	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.3			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.3	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.4			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.4	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.5			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.5	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.6			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.6	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.7			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.7	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.8			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.8	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.9			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.9	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.10			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.10	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.11			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.11	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Technical Task 2.12			
Title of Task	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.)			
Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other			
Subtotals	0	0	0
			0
			0
			0
Indirect			
Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 2.12	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Reporting Task 3.1			
Quarterly Progress Reports	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 3.1	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Reporting Task 3.2			
Final Report	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 3.2	0	0	0

Detailed Task Budgets

Applicant:			
Project Title:			
Reporting Task 3.3			
Final Meeting	Total \$	Match Funding \$	CEC Cost
Personnel (Direct Labor) (List personnel names and/or job classifications, with number of hours and hourly rate for each.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
			0
			0
			0
Fringe Benefits (for the above direct labor)			0
Travel (Describe types of travel expenses and number of trips.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
			0
Equipment (List items with cost >\$5,000 and life > 1 year.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Supplies (List items and quantities.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Contractual (Sub-Contracts) (List companies/organizations.) Subtotals	0	0	0
			0
			0
			0
			0
			0
			0
Other Subtotals	0	0	0
			0
			0
			0
Indirect Subtotals	0	0	0
Indirect Overhead			0
G&A Overhead			0
			0
TOTALS for Task 3.3	0	0	0

Section F. Application Attachment F.4: <i>Products and Due Dates</i>	
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All Applicants are required to complete Attachment F.4 for the pre-application and the final application.	
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Applicant:				
Project Title:				
Task Number	Task Name	Product(s)	Planned Start Date	Planned Completion Date
1.0	Project Start-Up Tasks			
1.1	Kick-Off Meeting			
1.2	Document Match Funding			
1.3	Identify Required Permits			
1.4	Obtain Required Permits			
2.0	Project Technical Activities			
3.0	Reporting Activities			
3.1	Quarterly Progress Reports			
3.2	Final Report			
3.2.1	Final Report Outline			
3.2.2	Draft Final Report			
3.2.3	Final Report			
3.3	Final Meeting			

Section G. Application Attachment G.1: *Applicant Category*

All Applicants are required to complete Attachment G.1 for the final application only.

Check the categories that apply to the applicant and attach the information required for your status:¹

LOCAL JURISDICTION

___ ***Certification.*** All local jurisdictions must submit a signed **Attachment G.2 Certification** certifying that the information presented is correct and complete and authorizing the Energy Commission to make inquiries and verify the information contained in this application.

___ ***Local Jurisdictions Needing a Resolution.*** All local jurisdictions must attach resolutions from their governing boards 1) authorizing submittal of this application, 2) accepting an award if recommended for funding, 3) designating an authorized representative, 4) committing matching funds contribution (See **Attachment G.3 Resolution A**). No further authorizations are needed.

PRIVATE ENTITY

___ ***Certification.*** All private entities must submit a signed **Attachment G.2 Certification** certifying that the information presented is correct and complete and authorizes the Energy Commission to make inquiries and verify the information contained in this application.

___ ***Private Entity Needing Authorizing Letter.*** All private entities must submit a letter from a duly authorized representative stating that the applicant is fully authorized to submit this application and is empowered to execute all necessary contracts, agreements, amendments, and payment requests pertaining to its implementation (See **Attachment G.6 Authorizing Letter**). All private entity applicants must also submit either a permit or a resolution from the governing body of the local jurisdiction within which the project is located.

___ ***Private Entity Needing Permit.*** List any local jurisdiction permits required to initiate, complete, and/or operate any aspect of your project. Describe the status of permit(s) as of the date of application (preparing application, being reviewed, approved, etc.). List permit(s) in **Attachment G.7 Permits**.

___ ***Private Entity Needing a Resolution.*** If a local permit is not required, private entity applicants must submit a resolution from the local governing body that the proposed project has been approved by the city, county, or Indian reservation in which the project is located. (See **Attachment G.4 Resolution B**).

¹The kind of document you submit depends on your status as either a local jurisdiction/public entity or a private entity.

Section G. Application Attachment G.2: *Certification*

All Applicants are required to complete Attachment G.2 for the final application only.

CERTIFICATION

I certify to the best of my knowledge that the information contained in this application and supplemental information is correct and complete.

I authorize the California Energy Commission to make any necessary inquiries to verify the information I have presented.

Applicant Name

Signature of Authorized Representative

Date

Note: For a Local Jurisdiction, the Authorized Representative must be the person designated in their Governing Body's resolution. For a Private Entity, the Authorized Representative must be the President, Owner, General Partner or authorized (by original signed letter) designee.

Section G. Application Attachment G.3: *Resolution A*

If applicable, Applicants are required to complete Attachment G.3 for the final application only.

RESOLUTION

Resolution by a Local Governmental Jurisdiction Applying for its Own Project

WHEREAS, the **(name of local governmental jurisdiction here)** recognizes that it is in the interest of the regional, state, and national economy to develop alternative energy resources to reduce our dependence on foreign oil; and,

WHEREAS, geothermal energy is indigenous to **(name local geographic area)**, and its careful development may provide benefits to the local community in the form of jobs and reduced fuel costs; and,

WHEREAS, GRDA or PIER funds are available through the California Energy Commission for grants and loans to local governments for geothermal-related activities;

NOW, therefore, be it resolved that the **(name governing body of the local governmental jurisdiction)** authorizes the submittal of the application to the California Energy Commission for funds to execute the **(name project)**.

Be it also resolved, if recommended for funding by the Commission, the State Legislature, and the Department of Finance, the **(name of governing body of the local governmental jurisdiction)** authorizes **(name of local governmental jurisdiction)** to accept a loan or grant award up to the amount of this application for \$ **(name requested amount)**, and, that **(name job title of designated project manager)** acting for the **(name local governmental jurisdiction)** is hereby authorized and empowered to execute in the name of **(name local governmental jurisdiction)**, all necessary contracts and agreements, and amendments hereto, to implement and carry out the purposes specified in the application.

The foregoing resolution was passed by the **(name governing body of the local governmental jurisdiction)** this _____ day of _____, _____.

Effective _____, _____

ATTEST:

Signed: _____

Date: _____

Title: _____

Section G. Application Attachment G.4: *Resolution B*

If applicable, Applicants are required to complete Attachment G.4 for the final application only.

RESOLUTION

Resolution by a Local Governmental Jurisdiction Approving a Project Initiated by a Private Entity in the Local Jurisdiction

NOTE: If the local jurisdiction has issued a permit(s) for your project (e.g. land use, building permits etc.), such permit(s) may substitute for the following formal resolution by the local jurisdiction to meet Energy Commission requirements. If there is no permit(s), the following formal resolution is required:

WHEREAS, the **(name local governmental jurisdiction here)** recognizes that it is in the interest of the regional, state, and national economy to develop alternative energy resources to reduce our dependence on foreign oil; and,

WHEREAS, geothermal energy resources are found in **(name local geographic area)**, and its careful development may provide benefits to the local community in the form of jobs and reduced fuel costs; and,

WHEREAS, **(name private party developing project)** has proposed a project with potential significance to both the local community and the geothermal industry; and,

WHEREAS, the **(name governing body of the local governmental jurisdiction)** has authority to approve geothermal-related projects in its jurisdiction; and,

WHEREAS, **(name private party developing project)** has requested approval for **(name project)** from **(name governing body of the local governmental jurisdiction)**;

Now, therefore, be it resolved that the **(name governing body of the local governmental jurisdiction)** hereby approves **(name project)**.

The foregoing resolution was passed by the **(name governing body of the local governmental jurisdiction)** this _____ day of _____, _____.

Effective: _____, _____

ATTEST:

Signed: _____

Date: _____

Title: _____

Section G. Application Attachment G.5: *Resolution C*

If applicable, Applicants are required to complete Attachment G.5 for the final application only.

RESOLUTION

At a minimum, we need the following in the authorizing *Resolution*:

- Brief description of the project.
- Acceptance of award up to \$ (specific dollar amount).
- Authorization of a person, by title, or authorized designee, empowered to execute agreement and all future documents related to this award.
- *Resolution* approved by your Governing Authority with a signature.

Section G. Application Attachment G.6: *Authorizing Letter*

If applicable, Applicants are required to complete Attachment G.6 for the final application only.

AUTHORIZING LETTER

<Name>, <title>, is a duly authorized representative of <company name>. <Name> is fully authorized to submit this application, and is empowered to execute all necessary contracts, agreements, amendments and payment requests pertaining to its implementation.

Signature of Authorized Representative

Date

Section G. Application Attachment G.7: *Permits*

If applicable, Applicants are required to complete Attachment G.7 for the final application only.

PERMITS

List of Permits:

Section H. Application Attachment H.1:

Confidential Products and Pre-existing Intellectual Property Lists

All Applicants must complete Attachment H.1 for the pre-application and the final application.

ATTACHMENT H.1 *Confidential Products and Preexisting Intellectual Property Lists*

PART I: CONFIDENTIAL PRODUCTS

Pursuant to 20 California Code of Regulations section 2505(c)(2)(B), the Commission designates the following as confidential.

- ☐ **No: Confidential Proposal Products are NOT Submitted with the Application.**
- ☐ **Yes: Confidential Proposal Products are Submitted with the Application.**

AND

- ☐ **No: Confidential Project Products will NOT be submitted with the Funding Agreement.**
- ☐ **Yes: Confidential Project Products will be submitted with the Funding Agreement.**

Description of Information to be Kept Confidential: <ul style="list-style-type: none">• Title of document/name of product• Task Number• Portion of document to be kept confidential• General description of the Technology to be kept confidential.	Legal Basis for Confidential Designation: <ul style="list-style-type: none">• Trade Secret<ul style="list-style-type: none">--Technical--Business--Marketing--Economic/Financial• Patent application number	Term of Confidentiality

PART II: PREEXISTING INTELLECTUAL PROPERTY

Applicant has identified the following intellectual property as pre-existing the effective date of this application and is required for performance of the *Work Statement* of this application, but is not a product.

☐ **No: Pre-existing Intellectual Property**

OR

☐ **Yes: Pre-existing Intellectual Property (Please insert "none" in the types that do not apply):**

Patents Issued

Title	Patent Number	Inventors/ Assignee (Owner)	File Date	Issue/ Grant Date	Country	Public Description

Patent Applications

Title	File Date	Public Description (2-3 sentences)

Trade Secrets

Title	Public Description (2-3 sentences)

Copyrights

Title	Copyright Number	Owner	File Date	Issue/ Grant Date	County	Public Description

Trademarks

Title	Trademark Number	Owner	File Date	Issue/ Grant Date	Country	Public Description

Disclosure Memos

Title	Disclosure Date	Memo Number, if applicable	Public Description (2-3 sentences)

Invention Berkeley (DOE National Labs Only)

Title	Number	Date

Section I. Application Attachment I.1: *Financial* (Private Entities Only)

If applicable, Applicants are required to complete Attachment I.1 for the final application only.

Applicant Information

Full Legal Name of Applicant: _____

Business Address: _____

Telephone Number: _____

California Tax ID Number: _____

Nature of Business: _____

Number of Employees: _____

Year Established: _____

How Long Under Current Ownership? _____

Legal Form of Business: _____

_____ Sole Proprietorship	_____ Limited Partnership
_____ General Partnership	_____ Corporation
_____ Sub-Chapter S Corporation	_____ Other (identify)

- If Corporation, attach Article of Incorporation.
- If Partnership, attach Partnership Agreement.
- If Sole Proprietorship, attach Fictitious Name Filing.

Note: Certain entities such as corporations, limited partnerships/limited liability companies may be required to register and be in good standing with the California Secretary of State to be eligible to enter into a funding agreement with the Energy Commission. If you are not registered with the California Secretary of State, we encourage you to contact their office at www.ss.ca.gov or (916) 653-6814 as soon as possible to avoid potential delays in beginning your project should you be awarded funding.

Ownership/Management Information

Applicants must provide the following management and ownership information:

Management (all applicants)

Name	Title	Years with Company
_____	_____	_____
_____	_____	_____
_____	_____	_____

Ownership (list all corporate and partnership applicants)

Shareholder/Partner	% Ownership	SS#	General or Limited
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Financial Information

Provide the information requested under the applicant's legal form of business from the following categories. If 25 percent or more of non-governmental match funding is coming from an outside source(s), the following information must be provided on that source(s) as well. **Please check off the information that has been included in this application.**

For Corporations

Check A, B, C or Check A, B, D

- ☐ A) Current personal financial statement and the most recent one year's complete federal tax return with all schedules for all principals of closely-held corporations only;
- ☐ B) Identify cash from outside sources if match share(s) identified in the application do not materialize;
- ☐ C) Three most recent years of complete, independent CPA-prepared, FYE audited, reviewed, or compiled financial statements;
- ☐ D) Three most recent years internally prepared FYE financial statements which include at least income statements, balance sheets, and cash flow statements; **plus** three most recent years complete federal tax returns (as submitted to taxing authorities) with all schedules. (If the corporation has marginal assets, current personal financial statements and the most recent one-year's complete federal tax returns with all schedules for all principals may be requested for the final application.)

For Partnerships

Check A, B, C or Check A, B, D, E

- ☐ A) Current personal financial statement and the most recent one year's complete federal tax return with all schedules for general partners;
- ☐ B) Identify cash from outside sources if match share(s) identified in the application do not materialize;
- ☐ C) Three most recent years of complete, independent CPA-prepared, FYE audited, reviewed, or compiled financial statements;
- ☐ D) Three most recent years internally-prepared, FYE financial statements which include at least an income statement, balance sheet, and cash flow statement;
- ☐ E) Three most recent years complete federal tax returns (as submitted to taxing authorities) with all schedules and **K-1's**.

For Sole Proprietors

Check A, B, C, D

- ☐ A) Current personal financial statement and the most recent one year's complete federal tax return with all schedules for all principals;
- ☐ B) Identify cash from outside sources if match share(s) identified in the application do not materialize;
- ☐ C) Three most recent years of complete federal personal income tax returns (as submitted to taxing authorities) with all schedules;
- ☐ D) Current personal financial statement (preferably on a bank form).

Other Information

All private-entity applicants **must** answer the following questions and provide additional information as required. Failure to do so will result in an incomplete application that will be returned unprocessed to you for completion.

YES NO

- | | | |
|--------------------------|--------------------------|--|
| <input type="checkbox"/> | <input type="checkbox"/> | Has your business, or you as a sole proprietor, ever filed bankruptcy or defaulted on any debts? |
| <input type="checkbox"/> | <input type="checkbox"/> | Is your business, or you as a sole proprietor, a party to any claim or lawsuit? |
| <input type="checkbox"/> | <input type="checkbox"/> | Are you aware of any potential adverse change to the company's business or financial condition that can reasonably be anticipated? |
| <input type="checkbox"/> | <input type="checkbox"/> | Does your company anticipate any significant capital expenditures within the next twelve (12) months? |
| <input type="checkbox"/> | <input type="checkbox"/> | Does the company have any contingent liabilities? (i.e., is the business or principal an endorser, guarantor, or co-maker for any obligation?) |

If the answer to any of the above questions is YES, explain fully.

Collateral Information (only for private entity applicants applying for a loan)

All loan awards must be fully collateralized within 60 days after the date the Commission approves the funding award or the award may be cancelled at the Commission's discretion. The Commission's Grants and Loans Office must approve the collateral. Collateral will consist of California real property, equipment financed by the loan award, other business assets, and personal assets of project principals and guarantors. See **Exhibit 8 Security Checklist**, which outlines the minimum requirements for typical collateral types. The Commission reserves the right to accept or reject any offered collateral. Collateral will be discounted per the guidelines specified in the **Exhibit 8 Security Checklist**. Provide full details of all collateral offered to secure 100 percent of the requested loan amount.

Exhibit 1: TAC GRDA Resource Development Project Scoring Form

Proposal Number: _____

Geothermal Program Technical Advisory Committee Scoring of Resource Development Project Final Applications

Applicant Name:

Project Title:

Technical Advisory Member:

Scoring Criteria. For each criteria listed, provide your assessment on how well this final application addresses the bullet items:

D.1. Economic and Employment Benefits Score: _____ of 15 possible points

The extent to which the proposed project will create local and statewide economic and employment benefits. In particular, the degree the project:

- improves local jobs opportunities, and decreases unemployment;
- stimulates business investment in geothermal energy or GSHP;
- improves the competitiveness of California's geothermal companies;
- increases local and state tax revenues;
- stimulates small business development;
- increases local standards of living by producing energy cost savings, or otherwise reducing consumer costs;
- helps to develop a green energy market;
- increases energy resource diversity and/or security.

D.2. Demonstration Value Score: _____ of 15 possible points

The extent to which the proposed project will overcome technical, economic, institutional, and informational barriers. In particular, the degree the project demonstrates an innovation that:

- broadens the potential for implementation of direct-use geothermal or GSHP technology;
- improves the competitiveness of direct-use geothermal energy or GSHP as an energy resource;
- increases resource/electricity availability, flexibility, reliability, and power quality;
- improves efficiencies;
- provides environmental, and health and safety benefits or mitigates adverse impacts;
- reduces capital costs or operation and maintenance costs;
- maintains California's lead in the development and use of renewable technologies;
- includes defined technology transfer activities as part of the project.

Exhibit 1: TAC GRDA Resource Development Project Scoring Form

D.3. Payback and Cost Effectiveness

Score: ____ of 15 possible points

The extent the proposed project is economically viable (profitable) and represents a high benefit to cost ratio. Considerations include:

- the amount of public (versus private) benefits that will result from the project;
- the degree to which the project represents a reasonable funding request relative to overall project cost;
- whether the project is expected to result in a product or service capable of near-term market introduction;
- the profitability of the project;
- ability to repay (loan applicants only).

D.4. Resource

Score: ____ of 15 possible points

a. For all technologies other than closed loop GSHP systems:

Proven extent of the resource

The proven extent of the resource is evaluated by the degree to which an identified geothermal resource is developed and capable of supporting the proposed project. Considerations include the degree to which:

- technical and economic feasibility studies, resource assessments, or exploration drilling demonstrate that the resource is of adequate size, quality, and accessibility;
- extended geothermal resource life is anticipated through innovation to increase efficiency without greater use of the geothermal resource, or through reservoir enhancement techniques.

OR

b. For closed loop GSHP systems:

Site characteristics and ground loop design

The adequacy of the design is evaluated by the degree to which the proposed project has (or will) address key aspects of system design and information gathering that have been established as critical to successful system implementation:

- the method by which ground thermal properties will be established and the type of testing if any to be performed;
- the method or methods by which building or process thermal loads (peak and annual) will be calculated;
- the methods, software or calculations by which the loop length calculation will be made;
- the results of an initial site characterization if available such as geology, hydrology, thermal conductivity drilling conditions, regulatory issues etc.

Exhibit 1: TAC GRDA Resource Development Project Scoring Form

D.5. Likelihood of Success

Score: ____ of 15 possible points

The likelihood of success will be evaluated according to the appropriateness and implementation of the goals and objectives established for the project. Considerations include the degree to which the:

- proposal has clearly identified and quantified goals and objectives for resolving key technical, environmental, economic, or other issues impeding development of geothermal energy or GSHP energy;
- proposal demonstrates a clear, appropriate, and complete plan for achieving identified goal and objectives;
- work schedule reasonably appropriates time with respect to sequence of tasks, time allocated per task, and the use of labor, equipment, and facilities;
- work statement is well written, identifies logical decision points for continuing or terminating the project and includes task deliverables/products;
- applicant proposes to deliver appropriate products such as test data, analytical methodologies, hardware demonstrations, and reports;
- budget clearly identifies the allocation of funds to perform the work;
- applicant/team has demonstrated its capability to perform the project's planning, scientific, and engineering work;
- applicant/team is capable of administering the funding agreement to control costs, maintain the project schedule, perform the work, and produce high quality products;
- when applicable, the proposal identifies future phases of the project which describe how the product or service will be introduced into the market.

D.6. Match Contribution

Score: ____ of 15 possible points

The appropriateness of the proposed level of match contribution will be evaluated based on:

- the total amount of match funds identified by the applicant;
- the commitment and security of the match contribution;
- the degree to which matching funds represent commitment of the applicant's own financial resources to complete the project.

D.7. Overriding Issues

Score: ____ of 30 possible points

Overriding issues are evaluated according to the degree to which the project addresses key problems facing the geothermal industry and/or is applicable to relevant goals and objectives stated in the *CEC Energy Action Plan* (available on the CEC website at www.energy.ca.gov/). Additionally, points can be awarded for issues or benefits identified in the proposal but not otherwise considered in other criteria (e.g. projects addressing issues that corresponds with current state and federal collaboration efforts). The key problems for which overriding issues points may be awarded include (but not limited to) projects expected to:

- 1) RD&D projects that lower the life-cycle cost of geothermal electricity generation including but not limited to:

Exhibit 1: TAC GRDA Resource Development Project Scoring Form

- Improving the efficiency and reducing the cost of resource exploration and assessment, permeability detection, mapping and well siting, resource drilling and well completion, power plant design and construction, environmental mitigation, reservoir monitoring, or power plant surface processing facilities;
 - creating value-added products and revenue streams from geothermal power plants; Reducing operation and maintenance costs of wells (i.e. production and/or injection) and power plants.
- 2) RD&D projects that lower the cost of enhanced geothermal systems by:
- Demonstrating and lowering the cost of extracting energy from resources of progressively lower permeability and fluid content or from lower temperature resources.
 - Investigating the extraction of fluids at higher energy densities (up to and including supercritical).
 - Using unproductive portions (low-permeability or fluid-depleted zones) of operating hydrothermal reservoirs as test beds for enhanced geothermal systems.
 - Investigating the potential of increasing generating capacities of existing geothermal power plants through wastewater injection.
 - Assessing high-temperature, non-hydrothermal resources suitable for development as enhanced geothermal systems.
- 3) Projects that add-on to existing geothermal facilities, increasing the capacity. These projects include but not limited to:
- Improving dispatchability of geothermal power plants;
 - Flash/Binary hybrid configurations;
 - Hybrid configuration of water-cooled and air-cooled cooling towers.
- These existing facilities shall have the following characteristics:
- Sufficient temperature and pressure capacities to allow additional capacity;
 - Infrastructure already exists to lower costs of further development;
 - Lower costs, lower risk exploration attributes (shallower, known resources, etc.).
- 4) Projects such as cascaded geothermal systems that take advantage of waste heat from new or existing facilities for additional electricity generation or direct use applications. These projects include:
- Power generation and direct use applications.
- 5) Projects that lower the life cycle cost of GSHP systems and incorporate the data collection necessary to verify these innovative features including but not limited to:
- Lowering the capital cost of the system through innovative design techniques such as decentralized ground loops, alternate ground loop configurations (ground water, surface water, waste streams etc), hybrid systems (down sized ground loop with fluid cooler), unique or innovative loads or applications (snow melting, pool heating, industrial loads, etc.).

Exhibit 1: TAC GRDA Resource Development Project Scoring Form

- Reducing operating costs through high efficiency pumping designs (decentralized pumps, low head loss loop design, etc.) use of high efficiency heat pump units, innovative ventilation air designs or controls.
 - Addressing other key GSHP system issues such as classroom noise level associated with unitary heat pump equipment, ventilation air handling, long-term ground temperature change, etc.
- 6) Projects that lower the life cycle cost of direct use systems and incorporate innovative features including but not limited to:
- Reduction of capital cost through particularly efficient use of the geothermal fluid (high design delta t), low cost piping materials, direct use of the geothermal fluid (absence of isolation heat exchanger).
 - Addressing other key direct use geothermal issues such as innovative disposal strategies, fluid chemistry handling, demonstration of low cost or unusual piping or heat exchange materials or equipment, innovative well pump design, new applications (industrial uses, vapor recompression, unusual aquaculture species, etc).
- 7) Projects such as cascaded geothermal systems that take advantage of waste heat from new or existing facilities for direct use or heat pump applications.
- Projects which use waste heat from power generation for lower temperature direct-use or heat pump applications.
 - Projects which use waste heat from direct-use applications for lower temperature heat pump applications.

Summary of Individual TAC Member Scoring for Proposal No. _____

D.1. Economic and Employment Benefits	Score: _____
D.2. Demonstration Value	Score: _____
D.3. Payback and Cost Effectiveness	Score: _____
D.4. Resource	Score: _____
D.5. Likelihood of Success	Score: _____
D.6. Match Contribution	Score: _____
D.7. Overriding Issues	Score: _____
	Score: _____
	Score: _____
TOTAL TAC MEMBER SCORE: _____	of 120 possible points

TAC Member Signature:

Exhibit 2: TAC GRDA Planning Project Scoring Form

Proposal Number: _____

Geothermal Program Technical Advisory Committee Scoring of Planning Project Final Applications

Applicant Name:

Project Title:

Technical Advisory Member:

Scoring Criteria. For each criteria listed, provide your assessment on how well this final application addresses the bullet items:

P.1. Demonstrated Need

Score: _____ of 15 possible points

The demonstrated need of a project is evidenced by the:

- anticipated effect of the project on geothermal energy development;
- consequences resulting from not doing the project;
- reasonableness of the costs relative to anticipated benefits;
- documented support from the geothermal community or regulatory agencies;
- degree to which other sources of funding were sought or obtained for the project.

P.2. Stimulation of Geothermal Energy Development

Score: _____ of 15 possible points

The degree to which a plan stimulates geothermal development is determined by how likely it will:

- identify options that mitigate documented negative impacts of existing geothermal development relative to air and water quality; ambient noise levels; wildlife, vegetation, viewshed esthetics; impacts to public health and safety or to public services and facilities;
- assist local government decision-makers to define appropriate planning or regulatory requirements related to geothermal energy development;
- remove institutional barriers affecting new or continued geothermal resource development;
- provide planning tools for evaluating new or existing resource development including exploration, drilling, reservoir development and power plant operations;
- provide planning tools for assessing geothermal heat pump potential, site feasibility, performance, or hybrid systems design.

P.3. Proven Extent of the Resource

Score: _____ of 15 possible points

The degree that the project stimulates development or removes barriers from an identified, significant, and usable geothermal resource.

Exhibit 2: TAC GRDA Planning Project Scoring Form

P.4. Implementation

Score: ____ of 15 possible points

The implementation value of a plan is evidenced by the extent to which planning work resulting from this project will be used and leads to positive changes. Considerations include the degree to which the:

- proposal has clearly identified and quantified goals and objectives for resolving key technical, environmental, economic or other issues confronting development of geothermal energy;
- proposal demonstrates a clear, appropriate and complete plan for achieving identified goal and objectives;
- work schedule reasonably schedules tasks, allocates time per task, and uses labor, equipment, and facilities;
- work statement identifies logical decision points for continuing or terminating the project;
- applicant proposes to deliver appropriate products such as test data, analytical methodologies, planning documents, and reports;
- budget clearly identifies the allocation of funds to perform the work;
- applicant/team has demonstrated its capability to perform the project's planning, scientific, and engineering work;
- applicant/team is capable of administering the funding agreement to control costs, maintain the project schedule, perform the work, and produce high quality products;
- when applicable, proposal identifies future phases of the project and, if appropriate, describes how the product or service will be introduced into the market.

P.5. Public Involvement

Score: ____ of 15 possible points

The degree to which the proposed plan will involve the public at large or the geothermal community is evidenced by:

- demonstrated interest and support for the project by stakeholders, regulatory agencies and the public;
- the degree the project plan includes efforts for recruiting broad based involvement in the project, information exchange, and the dissemination of results.

P.6. Match Contribution

Score: ____ of 15 possible points

The appropriateness of the proposed level of match contribution will be evaluated based on the:

- total amount of match funds identified by the applicant;
- commitment and security of the match contribution;
- degree to which matching funds represent a commitment of the applicant's own financial resources to complete the project.

Exhibit 2: TAC GRDA Planning Project Scoring Form

P.7. Overriding Issues

Score: ____ of 30 possible points

Overriding issues are evaluated according to the degree to which the project addresses key problems facing the geothermal industry and/or is applicable to relevant goals and objectives stated in the *CEC Energy Action Plan* (available on the CEC website at www.energy.ca.gov/). Additionally, points can be awarded for issues or benefits identified in the proposal but not otherwise considered in other criteria (e.g. projects addressing issues that corresponds with current state and federal collaboration efforts). The key problems for which overriding issues points may be awarded include (but not limited to) projects expected to:

- reduce the cost of geothermal electricity generation
- reduce the uncertainty and cost of enhanced geothermal systems
- provide add-on development for power production at existing geothermal facilities
- provide cascaded geothermal systems.

Summary of Individual TAC Member Scoring for Proposal No. ____

P.1. Demonstrated Need	Score: ____
P.2. Stimulation of Geothermal Energy Development	Score: ____
P.3. Proven Extent of the Resource	Score: ____
P.4. Implementation	Score: ____
P.5. Public Involvement	Score: ____
P.6. Match Contribution	Score: ____
P.7. Overriding Issues	Score: ____

TOTAL TAC MEMBER SCORE: ____ of 120 possible points

TAC Member Signature:

Exhibit 3: TAC GRDA Mitigation Project Scoring Form

Proposal Number: _____

Geothermal Program Technical Advisory Committee Scoring of Mitigation Project Final Applications

Applicant Name:

Project Title:

Technical Advisory Member:

Scoring Criteria. For each criteria listed, provide your assessment on how well this final application addresses the bullet items:

M.1. Documented Impact

Score: _____ of 15 possible points

Documented impact is evidenced by the degree the proposed project is based on reliable and well-documented information, data, and evidence. In particular, the degree to which the proposal clearly describes the impact being mitigated, benefits of mitigation, consequences of inaction, and support for the recommended mitigation by regulatory agencies.

M.2. Demonstrated Need

Score: _____ of 15 possible points

The demonstrated need of a project is evidenced by the:

- the degree the project removes documented negative impacts of existing geothermal development relative to air and water quality; ambient noise levels; wildlife, vegetation, viewshed esthetics; impacts to public health and safety or to public services and facilities;
- impact on geothermal energy resources development resulting from the project;
- consequences resulting from not doing the project;
- reasonableness of the costs relative to anticipated benefits;
- documented support from the geothermal community or regulatory agencies;
- degree to which other sources of funding were sought/obtained for the project.

M.3. Availability of Alternatives to Mitigate the Impact Score: _____ of 15 possible points

The extent to which the proposed project represents the best solution compared to available alternatives. Considerations include the:

- degree to which the proposal identifies and analyzes mitigation alternatives;
- quality of the analysis for mitigating the impact including an assessment of the advantages and disadvantage of each alternative;
- technical and economic feasibility studies supporting the project.

Exhibit 3: TAC GRDA Mitigation Project Scoring Form

M.4. Timeliness

Score: ____ of 15 possible points

Timeliness is evaluated according to the degree there are near-term positive consequences from the project. Considerations include:

- degree the project will provide near-term benefits for development of geothermal resources, environmental quality, or public health and safety;
- degree there are significant and negative consequences from not doing the project;
- demonstrated interest and support for the project by stakeholders, regulatory agencies and the public.

M.5. Likelihood of Success

Score: ____ of 15 possible points

The likelihood of success will be evaluated according to the appropriateness and implementation of the goals and objectives established for the project. Considerations include the degree to which the:

- proposal has clearly identified and quantified goals and objectives for resolving key environmental and socio-economic issues impeding development of geothermal energy;
- proposal demonstrates a clear, appropriate, and complete plan for achieving identified goals and objectives;
- work schedule reasonably schedules tasks, allocates time per task, and uses labor, equipment and facilities;
- work statement identifies logical decision points for continuing or terminating the project;
- applicant proposes to deliver appropriate products such as test data, analytical methodologies, hardware demonstrations, and reports;
- budget clearly identifies the allocation of funds to perform the work;
- applicant/team has demonstrated its capability to perform the project's planning, scientific, and engineering work;
- applicant/team is capable of administering the funding agreement to control costs, maintain the project schedule, and perform the work and produce high quality products.

M.6. Match Contribution

Score: ____ of 15 possible points

The appropriateness of the proposed level of match contribution will be evaluated based on:

- the total amount of match funds identified by the applicant;
- the commitment and security of the match contribution;
- the degree to which matching funds represent a commitment of the applicant's own financial resources to complete the project.

Exhibit 3: TAC GRDA Mitigation Project Scoring Form

M.7. Overriding Issues

Score: ____ of 30 possible points

Overriding issues are evaluated according to the degree to which the project addresses key problems facing the geothermal industry and/or is applicable to relevant goals and objectives stated in the *CEC Energy Action Plan* (available on the CEC website at www.energy.ca.gov/). Additionally, points can be awarded for issues or benefits identified in the proposal but not otherwise considered in other criteria. The key problems for which overriding issues points may be awarded include (but is not limited to) projects expected to:

- reduce the cost of geothermal electricity generation
- reduce the uncertainty and cost of enhanced geothermal systems
- provide add-on development for power production at existing geothermal facilities
- provide cascaded geothermal systems.

Summary of Individual TAC Member Scoring for Proposal No. ____

M.1. Documented Impact	Score: ____
M.2. Demonstrated Need	Score: ____
M.3. Availability of Alternatives to Mitigate the Impact	Score: ____
M.4. Timeliness	Score: ____
M.5. Likelihood of Success	Score: ____
M.6. Match Contribution	Score: ____
M.7. Overriding Issues	Score: ____

TOTAL TAC MEMBER SCORE: ____ of 120 possible points

TAC Member Signature:

Exhibit 4: TAC PIER RD&D Project Scoring Form

Proposal Number: _____

Geothermal Program Technical Advisory Committee Scoring of PIER RD&D Project Final Applications

Applicant Name:

Project Title:

Technical Advisory Member:

Scoring Criteria. For each criteria listed, provide your assessment on how well this final application addresses the bullet items:

RDD.1. Affordability: Score: _____ of 10 possible points Improves Energy Cost/Value of California's Electricity

Proposal should address the extent to which the proposed project will develop products, services and/or knowledge that improves the affordability of electricity for California ratepayers through:

- Reduced cost of electricity by 1.0 to 2.0 cents/kWh (base case = 6.0 cents/kWh) for the provided level of service, quality, or output.
- Improved efficiency (heat rate = 11,000 BTU/kWh).
- Co-produced value-added products.
- Increased in operating flexibility that can lead to improved energy value (i.e., provide ancillary services).
- Lowered operation and maintenance costs.

RDD.2. Environmental: Score: _____ of 10 possible points Reduces/Improves Environmental and/or Public Health Impacts

The proposal should address the extent to which the proposed project will develop products, services and/or knowledge that can reduce the environmental and public health impacts resulting from the use of electricity, either by directly reducing environmental and/or health costs and/or by increasing environmental and/or health benefits. Reduction in environmental impacts and improvement in public health impacts should be quantified. Included in this area are:

- Reduced air pollution emissions below applicable BACT¹ levels in California.
- Reduced watershed impacts and water quality impacts.
- Reduced risks of additional negative impacts, e.g., by increasing the diversity of generation and supply, by developing technologies whose negative impacts are less vulnerable to the range of possible future environmental scenarios.

Exhibit 4: TAC PIER RD&D Project Scoring Form

RDD.3. Reliability: Score: ____ of 10 possible points **Improvement in Reliability/Quality of California's Electricity**

The proposal should address the extent to which the proposed project will develop products, services and/or knowledge that helps maintain or improve the reliability and/or quality of:

- Improving the dispatchability of geothermal electricity generation to approach dispatchability typical of natural gas-fired generation systems.
- Sustaining or increasing the physical reliability (e.g., interruption frequency and severity) and security (e.g., vulnerability to catastrophic events) of generation.
- Providing ancillary services and participate in energy sales market and must run contracts under the competitive generation market.
- Improving quality of power.

RDD.4. Skills and Experience of Team Score: ____ of 15 possible points

The proposal should indicate the extent to which:

- The team has demonstrated its capability to perform the project's scientific and engineering technical work.
- The team is capable of administering the contract to control costs, maintain the project schedule, and help develop the technology.
- The team has the financial skills to help ensure market connection of the technology.

RDD.5. Economic Benefits: Score: ____ of 15 possible points **Direct Impacts on Local and State Economics**

The extent to which the proposed project will result in products, services, and/or knowledge with direct economic benefits to California's local or state economies by: (1) increased employment; (2) increased quality of jobs; (3) increased tax revenues or benefits; (4) some other factor that directly increases California's gross state product. Evaluations using this criterion will consider, for example:

- The probability that the project will lead to commercialized or otherwise useful products and services in the short-term (1-5 year), medium-term (6-10 year), and long-term (11+ year).
- The number and quality of jobs inside California that will be created, should successful commercialization or other use occur.
- Jobs created by the science and/or knowledge resulting from the project.
- Tax revenues or other benefits resulting from in-state jobs.

RDD.6. Cost Effectiveness of Project Score: ____ of 10 possible points

The cost of the proposed project will be evaluated relative to the overall public benefits being provided by the project. Evaluations using this criterion will consider the following:

- The total cost of the project.
- The amount of PIER funds being requested.
- The likelihood that the project will provide significant science or technology benefits.
- The estimated value of the public benefits to be provided by the project.

Exhibit 4: TAC PIER RD&D Project Scoring Form

- The time frame in which those benefits will occur.

RDD.7. Likelihood of Success and Market Connection

Score: ____ of 10 possible points

The likelihood, timing, and economic value of successful market transfer of products, services, and/or knowledge resulting from the project, and the extent to which the proposed project has made provision to facilitate market transfer. Evaluations using this criterion will consider, for example:

- The probability that the project will lead to commercialized or otherwise useful products and/or services in the short-term (1-5 year), medium-term (6-10 year), and/or long-term (11+ year).
- The dollar value of these products and services, should successful commercialization or other uses occur.
- Whether specific hurdles to commercialization or other uses are addressed, such as manufacturing technology/cost, involvement of regulatory entities for projects focused on environmental benefits, participation of related companies/industries when the project addresses a component of a larger system, etc.
- The probability that science and/or knowledge resulting from the project will reach and address the needs of appropriate scientific, policy-making and other communities; and the value of the science and/or knowledge to these communities.
- The likely extent of implementation of environmental improvements.

RDD.8. Match Contribution

Score: ____ of 10 possible points

The appropriateness of the proposed level of match funds will be evaluated based on:

- The types, amount and sources of the match funds identified by the bidder.
- The amount of public (versus private) benefits that will result from the project.
- The degree to which matching funds represent active participation by the bidder.
- The security of the proposed match funds.
- The type of match funding proposed (e.g., cash versus in-kind contributions).
- Note that in general the percentage of matching funds should be proportional to the amount of private versus public benefits that are likely to result from the project. That is, projects that provide more private benefits than public benefits require a higher percentage of matching funds than projects that provide more public benefits than private benefits. Also, in general, the percentage of matching funds should be greater for innovations that are closer to market adoption. That is, projects whose results are more likely to lead to products and services that can be commercialized within a short time frame, will need a higher percentage of matching funds than projects whose results are further removed in time from commercialization.

RDD.9. Overriding Issues

Score: ____ of 30 possible points

Overriding issues are evaluated according to the degree to which the project addresses key problems facing the geothermal industry and/or is applicable to relevant goals and objectives stated in the *CEC Energy Action Plan* (available on the CEC website at www.energy.ca.gov/). Additionally, points can be awarded for issues or benefits identified in the proposal but not

Exhibit 4: TAC PIER RD&D Project Scoring Form

otherwise considered in other criteria (e.g. projects addressing issues that corresponds with current state and federal collaboration efforts). The key problems for which overriding issues points may be awarded include (but not limited to) projects expected to:

- 1) RD&D projects that lower the life-cycle cost of geothermal electricity generation including but not limited to:
 - Improving the efficiency and reducing the cost of resource exploration and assessment, permeability detection, mapping and well siting, resource drilling and well completion, power plant design and construction, environmental mitigation, reservoir monitoring, or power plant surface processing facilities;
 - Creating value-added products and revenue streams from geothermal power plants; Reducing operation and maintenance costs of wells (i.e. production and injection) and power plants.
- 2) RD&D projects that lower the cost of enhanced geothermal systems by:
 - Demonstrating and lowering the cost of extracting energy from resources of progressively lower permeability and fluid content or from lower temperature resources.
 - Investigating the extraction of fluids at higher energy densities (up to and including supercritical).
Using unproductive portions (low-permeability or fluid-depleted zones) of operating hydrothermal reservoirs as test beds for enhanced geothermal systems.
 - Investigating the potential of increasing generating capacities of existing geothermal power plants through wastewater injection.
 - Assessing high-temperature, non-hydrothermal resources suitable for development as enhanced geothermal systems.
- 3) Projects that add-on to existing geothermal facilities, increasing the capacity. These projects include but not limited to:
 - Improving dispatchability of geothermal power plants;
 - Flash/Binary hybrid configurations;
 - Hybrid configuration of water-cooled and air-cooled cooling towers.

These existing facilities shall have the following characteristics:

- Sufficient T&D capacity to allow additional capacity;
 - Infrastructure already exists to lower costs of further development;
 - Lower costs, lower risk exploration attributes (shallower, known resources, etc.).
- 4) Projects such as cascaded geothermal systems that take advantage of waste heat from new or existing facilities for additional electricity generation or direct use applications. These projects include:
 - Power generation and direct use applications.

Exhibit 4: *TAC PIER RD&D Project Scoring Form*

Summary of Individual TAC Member Scoring for Proposal No. ____

RDD.1. Affordability	Score: ____
RDD.2. Environmental	Score: ____
RDD.3. Reliability	Score: ____
RDD.4. Skills and Experience of Team	Score: ____
RDD.5. Economic Benefits	Score: ____
RDD.6. Cost Effectiveness of Project	Score: ____
RDD.7. Likelihood of Success	Score: ____
RDD.8. Match Contribution	Score: ____
RDD.9. Overriding Issues	Score: ____

TOTAL TAC MEMBER SCORE: ____ of 120 possible points

TAC Member Signature:

Exhibit 5: *GRDA Terms and Conditions*

**TERMS AND CONDITIONS
FOR GEOTHERMAL GRANTS**

AWARD # - -



TERMS AND CONDITIONS

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TERMS AND CONDITIONS

1. *Grant Agreement*

This project is being funded with a grant from the California Energy Commission (Commission). Funding for this project was authorized by _____ No. ____, Chapter _____, Statutes of _____, and consists of funds from the _____.

This Agreement is comprised of the grant funding award, the Terms and Conditions, and all attachments. These Terms and Conditions are standard requirements for grant awards. The Commission may impose additional special conditions in this grant Agreement which address the unique circumstances of this project. Special conditions that conflict with these standard provisions take precedence.

The Recipient shall sign all six copies of this Agreement and return five signed packages to the Commission's Grants and Loans Office within 30 days. Failure to meet this requirement may result in the forfeiture of this award. When all required signatures are obtained, an executed copy will be returned to the Recipient.

Commission-funded work and/or the expenditure of Commission funds must occur within the term of this Agreement. However, the Commission cannot authorize any payments until all parties sign this Agreement.

2. *Attachments and References*

The following are attached and hereby expressly incorporated into this Agreement.

- Work Statement.
- Budget.
- Resolution of the Recipient or Local Jurisdiction Governing Body (if applicable).
- Resolution of the California Energy Commission (if applicable).
- Special Conditions

The Office of Management and Budget (OMB) Circulars and/or federal regulations identified below are incorporated by reference as part of this Agreement. These Terms and Conditions and any Special Conditions take precedence over the circulars and/or regulations. The OMB Circulars and federal regulations are used to help guide the administration of the award when questions arise during the course of performance of the award. The Commission reserves the right to use as much or as little of each circular or regulation it deems necessary to administer the award in good faith and consistent with prudent fiscal management of public funds. OMB Circulars may be accessed on the OMB web site at www.whitehouse.gov/omb/circulars/index.html or by calling the Office of Administration, Publications Office, at (202) 395-7332.

- Common Rule for Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments.

- OMB Circular A-110: Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (also applicable to private entities).
- 10 CFR Part 600: DOE Financial Assistance Regulations (www.pr.doe.gov/f600toc.html).
- OMB Circular A-87: Cost Principles for State, Local and Tribal Governments.
- OMB Circular A-21: Cost Principles Applicable to Grants, Contracts, and Other Agreements with Institutions of Higher Education (public and private colleges and universities).
- OMB Circular A-122: Cost Principles Applicable to Grants, Contracts, and Other Agreements with Non-Profit Organizations (non-profit organizations and individuals, except for those specifically exempted).
- OMB Circular A-133: Audits of States, Local Governments, and Non-Profit Organizations.
- Title 48 CFR, Ch. 1, Subpart 31.2: Contracts with Commercial Organizations (Supplemented by 48 CFR, Ch. 9, Subpart 931.2 for Department of Energy grants) (commercial firms and certain non-profit organizations) (www.access.gpo.gov/nara/cfr/cfr-table-search.html)

3. *Funding Limitations*

Any federal, state, and local laws and regulations applicable to your project not expressly listed in this Agreement are incorporated herein as part of this Agreement.

4. *Due Diligence*

The Recipient is required to take timely actions which, taken collectively, move this project to completion. The Commission Project Manager will periodically evaluate the schedule for completion of Work Statement tasks. If the Commission Project Manager determines (1) the Recipient is not being diligent in completing the tasks in the Work Statement or (2) the time remaining in the funding award is insufficient to complete all project work tasks not later than the Agreement term date, the Project Manager may recommend to the Policy Committee of the Commission (Committee) that this Agreement be terminated, and the Committee may, without prejudice to any of its remedies, terminate this Agreement.

5. *Products*

Products are defined as any tangible item specified in the Work Statement. Unless otherwise directed, draft copies of all products identified in the Work Statement shall be submitted to the Commission Project Manager for review and comment. The Recipient

will submit an original and two copies of the final version of all products to the Commission Project Manager.

6. *Reports*

a. Progress Reports

The Recipient shall submit progress reports to the Commission Project Manager as indicated in the Special Conditions or Work Statement. At a minimum, each progress report shall include the following:

Work Statement: This section should include a brief restatement of the approved tasks in the Work Statement and a report on the status of each. Included should be a discussion of any products due and whether or not the project is progressing according to schedule. This section also should include a discussion of any problems encountered, proposed changes to the tasks in the Work Statement, and anticipated accomplishments in the upcoming quarter.

Financial Status: This section should include a narrative report comparing costs to date with the approved Budget. The report should state whether or not the project is progressing within the approved Budget and discuss any proposed changes.

Additional Information: Additional information required in the progress reports may be specified in the Work Statement or Special Conditions.

b. Final Reports

A draft final report shall be submitted to the Commission Project Manager no later than 60 days prior to the end of the Agreement term. At a minimum, the report shall include:

- Table of Contents.
- Abstract.
- A brief summary of the objectives of the project and how these objectives were accomplished.
- Any findings, conclusions, or recommendations for follow-up or ongoing activities that might result from the successful completion of the project.
- A statement of future intent of the grant Recipient to maintain or further develop the project.
- A Payment Request form for the final payment (including any retention).

- Any additional information specified in the Work Statement or Special Conditions.

The Commission Project Manager will review the draft report. The Recipient will incorporate applicable comments and submit the final report (the original and two copies) to the Commission Project Manager.

Upon receipt of the final report, the Commission Project Manager shall ensure that all work has been satisfactorily completed.

c. **Rights in Reports**

The Commission reserves the right to use and reproduce all reports and data produced and delivered pursuant to this Agreement, and reserves the right to authorize others to use or reproduce such materials. Each report becomes the property of the Commission.

d. **Failure to Comply with Reporting Requirements**

Failure to comply with the reporting requirements contained in this award will be considered a material noncompliance with the terms of the award. Noncompliance may result in withholding of future payments, suspension or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards.

7. ***Legal Statement on Reports and Products***

No product or report produced as a result of work funded by this program shall be represented to be endorsed by the Commission, and all such products or reports shall include the following statement:

LEGAL NOTICE

This document was prepared as a result of work sponsored by the California Energy Commission. It does not necessarily represent the views of the Energy Commission, its employees, or the State of California. The Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this document; nor does any party represent that the use of this information will not infringe upon privately owned rights.

8. ***Amendments***

Changes to the Work Statement, changes to specific line items in the budget, or both, may be made under certain conditions. Such changes must not alter the original scope or purpose of the project or program as proposed in the grant application. Such changes must not appreciably affect the value of the project or program. Work Statement changes and/or cumulative transfers among budget line items that exceed 15 percent of the grant award require advance written approval of the Commission Project Manager and Grants and Loans Office. All

requests must be submitted directly to the Commission Project Manager in writing and include a description of the proposed change, revised attachment(s), and the reasons for the change. If the change is approved, the affected sections of the Agreement will be amended and signed by the Commission Project Manager, Grants and Loans Office, and the Recipient's authorized representative.

9. *Contracting and Procurement Procedures*

This section provides general requirements for an agreement between the Recipient and a third party ("subcontractor").

The Recipient is required, where feasible, to employ contracting and procurement practices that promote open competition for all goods and services needed to complete this project. Recipient shall obtain price quotes from an adequate number of sources for all subcontracts.

Subcontracting criteria are specified in the applicable OMB Circulars and/or federal regulations incorporated by reference in this Agreement. The Commission will defer to the Recipient's own regulations and procedures as long as they reflect applicable state and local laws and regulations and are not in conflict with the minimum standards specified in this Agreement and any OMB Circulars and/or federal regulations incorporated by reference in this Agreement.

Upon request, the Recipient must submit to the Commission Project Manager a copy of all solicitations for services or products required to carry out the terms of this Agreement, copies of the proposals or bids received, and copies of subcontracts executed. If a specific subcontractor was identified in the original grant application and the grant was evaluated based in part on this subcontractor's qualifications, then prior written approval from the Commission Project Manager is required before substituting a new subcontractor.

The Recipient is responsible for handling all contractual and administrative issues arising out of or related to any subcontracts it enters into under this Agreement.

All subcontracts must incorporate all of the following:

- A clear and accurate description of the material, products, or services to be procured as well as a detailed budget and timeline.
- Provisions which allow for administrative, contractual, or legal remedies in instances where subcontractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.
- Provisions for termination by the Recipient including termination procedures and the basis for settlement.
- Language conforming to the "Nondiscrimination" provision in this Agreement.
- Any additional requirements specified in the OMB Circulars incorporated by reference in this Agreement.

- The Standard of Performance provisions specified in this Agreement.
- Audit provisions regarding record retention specified in this Agreement.
- Language conforming to the “Indemnification” provision in this Agreement.
- Language conforming to the “License” provision in this Agreement.

Failure to comply with the above requirements may result in the termination of this Agreement.

10. *Bonding and Insurance*

The Recipient will follow its own bonding and insurance requirements relating to bid guarantees, performance bonds, and payment bonds without regard to the dollar value of the subcontract(s) as long as they reflect applicable state and local laws and regulations and are not in conflict with the minimum standards specified in the OMB Circulars incorporated by reference in this Agreement.

11. *Permits and Clearances*

The Recipient is responsible for ensuring all necessary permits and environmental documents are prepared and clearances are obtained from the appropriate agencies.

12. *Equipment*

Title to equipment acquired by the Recipient with grant funds shall vest in the Recipient. The Recipient shall use the equipment in the project or program for which it was acquired as long as needed, whether or not the project or program continues to be supported by grant funds and shall not encumber the property without Commission Project Manager approval. When no longer needed for the original project or program, the Recipient shall contact the Commission Project Manager for disposition instructions.

Recipient should refer to the OMB Circulars and/or federal regulations incorporated by reference in this Agreement.

13. *Termination*

This project may be terminated for any reason set forth below.

a. *With Cause*

In the event of any breach by the Recipient of the conditions set forth in this Agreement, the Commission Policy Committee may, without prejudice to any of its legal remedies, terminate this Agreement for cause upon five (5) days written notice to the Recipient.

b. Without Cause

The Commission Policy Committee may, at its option, terminate this Agreement without cause in whole or in part, upon giving thirty (30) days advance notice in writing to the Recipient by certified mail, return receipt requested. In such event, the Recipient agrees to use all reasonable efforts to mitigate the Recipient's expenses and obligations hereunder. Also in such event, the Commission shall pay the Recipient for all satisfactory services work performed and expenses incurred within 30 days after such notice of termination which could not by reasonable efforts of the Recipient have been avoided, but not in excess of the maximum payable under this Agreement.

14. *Travel and Per Diem*

For purposes of payment, Recipient's headquarters shall be considered the location of the Recipient's office where the employees assigned responsibilities for this award are permanently assigned. Travel expenditures not listed in this section cannot be reimbursed.

Travel not listed in the Budget section of this Agreement shall require prior written authorization from the Commission Project Manager. Recipient shall be reimbursed for authorized travel and per diem up to, but not to exceed, the rates allowed nonrepresented state employees. A copy of the current allowable reimbursement rates can be obtained by contacting the Commission's Grants and Loans Office at (916) 654-4381.

Travel expense claims must detail expenses using the allowable rates, and Recipient must sign and date the travel expense claim before submitting the travel expense claim to the Commission for payment. Expenses must be listed by trip including dates and times of departure and return. Travel expense claims and supporting receipts and expense documentation shall be attached to the Recipient's Payment Request. A vehicle license number is required when claiming mileage, parking, or toll charges. Questions regarding allowable travel expenses or per diem should be addressed to the Commission Project Manager.

15. *License*

The Commission shall be granted a no-cost, nonexclusive, nontransferable, irrevocable worldwide license to use or have practiced for or on behalf of the State of California inventions developed hereunder and patents or patent applications derived from such inventions. Recipient must obtain agreements to effectuate this clause with all persons or entities obtaining ownership interest in the patented subject inventions.

The Commission makes no claim to intellectual property that existed prior to this Agreement and was developed without Commission funding. If applicable, the Recipient gives notice that the items listed in the Intellectual Property attachment or exhibit have been developed without Commission funding and prior to the start of this Agreement. This list represents a brief description of the prior developed intellectual property. A detailed description of the intellectual property, as it exists on the effective date of this Agreement, may be necessary if Commission funds are used to further develop the listed intellectual property. This information will assist the parties to make an informed decision regarding intellectual property rights.

The Commission shall be granted the no-cost use of the technical data first produced or specifically used in the performance of this Agreement.

The Commission shall be granted a royalty-free nonexclusive, irrevocable, nontransferable worldwide license to produce, translate, publish, use and dispose of, and to authorize others to produce, translate, publish, use and dispose of all copyrightable material first produced or composed in the performance of this Agreement.

16. *Standard of Performance*

Recipient, its subcontractors and their employees, in the performance of Recipient's work under this award shall be responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures used in the Recipient's field.

Any costs for failure to meet the foregoing standard or to correct otherwise defective work that requires re-performance of the work, as directed by Commission Project Manager, shall be borne in total by Recipient and not the Commission. The failure of a project to achieve the performance goals and objectives stated in the Work Statement is not a basis for requesting re-performance unless the work conducted by Recipient and/or its subcontractors is deemed by the Commission to have failed the foregoing standard of performance.

In the event Recipient/subcontractor fails to perform in accordance with the above standard:

- (1) Recipient/subcontractor will re-perform, at its own expense, any task which was not performed to the reasonable satisfaction of the Commission Project Manager. Any work re-performed pursuant to this paragraph shall be completed within the time limitations originally set forth for the specific task involved. Recipient/subcontractor shall work any overtime required to meet the deadline for the task at no additional cost to the Commission;
- (2) The Commission shall provide a new schedule for the re-performance of any task pursuant to this paragraph in the event that re-performance of a task within the original time limitations is not feasible; and
- (3) The Commission shall have the option to direct Recipient/subcontractor not to re-perform any task which was not performed to the reasonable satisfaction of the Commission Project Manager pursuant to application of (1) and (2) above. In the event the Commission directs Recipient/subcontractor not to re-perform a task, the Commission and Recipient shall negotiate a reasonable settlement for satisfactory work performed. No previous payment shall be considered a waiver of the Commission's right to reimbursement.

Nothing contained in this section is intended to limit any of the rights or remedies which the Commission may have under law.

17. *Payment of Funds*

a. Payment Requests

The Recipient may request payment from the Commission at any time during the term of this Agreement although it is preferred that payment requests be submitted with the progress reports.

Payments will generally be made on a reimbursement basis for Recipient expenditures, i.e., after the Recipient has paid for a service, product, supplies, or other approved budget item. No reimbursement for food or beverages shall be made other than allowable per diem charges.

As a general rule, advance payments are not allowed. The Commission, at its sole discretion, may honor advance payment requests if warranted by compelling need. Advance payments shall only be made upon the satisfaction of conditions intended to protect grant funds from loss or misuse, including (1) depositing all advance payments into a separate interest-earning account; (2) reporting interest earned on advance payments to the Commission Project Manager; (3) the accounting of all advance payments within a timeframe specified by the Grants and Loans Office; (4) returning all unused advance payments and interest or portion thereof, within 60 days of the termination of this Agreement; and (5) other conditions as specified by the Grants and Loans Office.

Funds in this award have a limited period in which they must be expended. All Recipient expenditures must occur prior to the end of the term of this Agreement.

b. Documentation

All payment requests must be submitted using a completed Payment Request form (Exhibit A). This form must be accompanied by an itemized list of all charges and copies of all receipts or invoices necessary to document these charges for both Commission and match share. Any payment request that is submitted without the itemization will not be authorized. If the itemization or documentation is incomplete, inadequate, or inaccurate, the Commission Project Manager will inform the Recipient and hold the invoice until all required information is received or corrected. Any penalties imposed on the Recipient by a subcontractor because of delays in payment will be paid by the Recipient.

c. Release of Funds

The Commission Project Manager will not process any payment request during the Agreement term until the following conditions have been met:

- All required reports have been submitted and are satisfactory to the Commission Project Manager.

- All applicable special conditions have been met.
- All appropriate permits or permit waivers from governmental agencies have been issued to the Recipient and copies have been received by the Commission Project Manager.
- All products due have been submitted and are satisfactory to the Commission Project Manager.
- Other prepayment conditions as may be required by the Commission Project Manager have been met. Such conditions will be specified in writing ahead of time, if possible.

d. Retention

It is the Commission's policy to retain 10 percent of any payment request or 10 percent of the total Commission award at the end of the project. After the project is complete the Recipient must submit a completed payment request form requesting release of the retention. The Commission Project Manager will review the project file and, when satisfied that the terms of the funding Agreement have been fulfilled, will authorize release of the retention.

e. State Controller's Office

Payments are made by the State Controller's Office.

18. *Fiscal Accounting Requirements*

The Recipient shall review and comply with the administrative requirements outlined in the applicable sections of the OMB circulars and/or federal regulations incorporated as part of the funding Agreement. The OMB circulars and/or federal regulations are supplemented with the following requirements:

a. Accounting and Financial Methods

The Recipient shall establish a separate ledger account or fund for receipt and disbursement of Commission funds for each project funded by the Commission. Expenditure details must be maintained in accordance with the approved budget details using appropriate accounting practices.

b. Retention of Records

The Recipient shall retain all project records (including financial records, progress reports, and payment requests) for a minimum of three (3) years after the project has been formally concluded, or final payment received, whichever is later, unless otherwise specified in the funding Agreement.

Records for nonexpendable personal property acquired with grant funds shall be retained for three years after its final disposition.

c. Audits

Upon written request from the Commission, the Recipient shall provide detailed documentation of all expenses at any time throughout the project. In addition, the Recipient agrees to allow the Commission or any other agency of the state, upon written request, to have reasonable access to and the right of inspection of all records that pertain to the project during the term of this Agreement and for a period of three (3) years thereafter. Further, the Recipient agrees to incorporate an audit of this project within any scheduled audits, when specifically requested by the state. Recipient agrees to include a similar right to audit in any subcontract.

Recipients are strongly encouraged to conduct annual audits in accordance with the single audit concept. The Recipient should provide two copies of the independent audit report and any resulting comments and correspondence to the Commission Project Manager within 30 days of the completion of such audits.

d. Match or Cost Share (match)

If the Budget includes match, the Recipient's commitment of resources, as described in this Agreement, is a required expenditure for receipt of Commission funds. Grant funds will be released only if the required match percentages are expended. The Recipient must maintain accounting records detailing the expenditure of the match (actual cash and in-kind services) and provide complete documentation of expenditures as described under "Payment of Funds."

19. Indemnification

The Recipient agrees to indemnify, defend, and save harmless the state, its officers, agents, and employees from any and all claims and losses accruing or resulting to Recipient and to any and all contractors, subcontractors, materialmen, laborers, and any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged by the Recipient in the performance of this Agreement.

20. Disputes

In the event of a dispute or grievance between Recipient and the Commission regarding this Agreement, the following two-step procedure shall be followed by both parties. Recipient shall continue with responsibilities under this Agreement during any dispute.

a. Commission Dispute Resolution

The Recipient shall first discuss the problem informally with the Commission Project Manager. If the problem cannot be resolved at this stage, the Recipient must direct the grievance together with any evidence, in writing, to the Commission Grants and Loans Officer. The grievance must state the issues in the dispute, the legal authority or other basis for the Recipient's position and the remedy sought. The Commission Grants and Loans Officer and the Program Office Manager must make a determination on the problem within ten (10) working days after receipt of the written communication from the Recipient. The Grants and Loans Officer shall respond in writing to the Recipient, indicating a decision supported by reasons. Should the Recipient disagree with the Grants and Loans Officer decision, the Recipient may appeal to the second level.

The Recipient must prepare a letter indicating why the Grants and Loans Officer's decision is unacceptable, attaching to it the Recipient's original statement of the dispute with supporting documents, along with a copy of the Grants and Loans Officer's response. This letter shall be sent to the Executive Director at the Commission within ten (10) working days from receipt of the Grants and Loans Officer's decision. The Executive Director or designee shall meet with the Recipient to review the issues raised. A written decision signed by the Executive Director or designee shall be returned to the Recipient within twenty (20) working days of receipt of the Recipient's letter. The Executive Director may exercise the option of presenting the decision to the Commission at a business meeting. Should the Recipient disagree with the Executive Director's decision, the Recipient may appeal to the Commission at a regularly scheduled business meeting. Recipient will be provided with the current procedures for placing the appeal on a Commission Business Meeting Agenda.

b. Mutual Agreement for Arbitration

Should the Commission's Dispute Resolution procedure described above fail to resolve a dispute or grievance to the satisfaction of the Recipient, either party may seek to have the dispute or grievance resolved through binding arbitration. Both parties must consent before submitting the dispute to arbitration. The arbitration proceeding shall take place in Sacramento County, California, and shall be governed by the commercial arbitration rules of the American Arbitration Association (AAA) in effect on the date the arbitration is initiated. The dispute or grievance shall be resolved by one (1) arbitrator who is an expert in the particular field of the dispute or grievance. The arbitrator shall be selected in accordance with the aforementioned commercial arbitration rules. If arbitration is mutually decided by the parties, arbitration is in lieu of any court action and the decision rendered by the arbitrator shall be final (not appealable to a court through the civil process). However, judgement may be entered upon the arbitrator's decision and is enforceable in accordance with the applicable law in any court having jurisdiction over this Agreement. The demand for arbitration shall be made no later than six (6) months after the date of the termination of this Agreement, irrespective of when the dispute or grievance arose, and irrespective of the applicable statute of limitations for a suit based on the dispute or grievance.

The cost of arbitration shall be borne by the parties as follows:

- i) The AAA's administrative fees shall be borne equally by the parties;
- ii) The expense of a stenographer shall be borne by the party requesting a stenographic record;
- iii) Witness expenses for either side shall be paid by the party producing the witness;
- iv) Each party shall bear the cost of its own travel expenses;
- v) All other expenses shall be borne equally by the parties, unless the arbitrator apportions or assesses the expenses otherwise as part of his or her award.

At the option of the parties, any or all of these arbitration costs may be deducted from any balance of Agreement funds. Both parties must agree, in writing, to utilize Agreement funds to pay for arbitration costs.

If the parties do not mutually agree to binding arbitration, the sole forum to resolve the dispute is State court.

21. *Workers' Compensation Insurance*

- a. Recipient hereby warrants that it carries Worker's Compensation Insurance for all of its employees who will be engaged in the performance of this Agreement, and agrees to furnish to the Commission Project Manager satisfactory evidence of this insurance at any time the Commission Project Manager may request.
- b. If Recipient is self-insured for worker's compensation, it hereby warrants such self-insurance is permissible under the laws of the State of California and agrees to furnish to the Commission Project Manager satisfactory evidence of this insurance at any time the Commission Project Manager may request.

22. *General Provisions*

- a. Governing Law

It is hereby understood and agreed that this Agreement shall be governed by the laws of the State of California as to interpretation and performance.

- b. Independent Capacity

The Recipient, and the agents and employees of the Recipient, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of the State of California.

c. Assignment

Without the written consent of the Commission in the form of a formal written amendment, this Agreement is not assignable or transferable by Recipient either in whole or in part.

d. Timeliness

Time is of the essence in this Agreement.

e. Unenforceable Provision

In the event that any provision of this Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Agreement have force and effect and shall not be affected thereby.

f. Waiver

No waiver of any breach of this Agreement shall be held to be a waiver of any other or subsequent breach. All remedies afforded in this Agreement shall be taken and construed as cumulative, that is, in addition to every other remedy provided therein or by law.

g. Assurances

The Commission reserves the right to seek further written assurances from the Recipient and its team that the work of the project under this Agreement will be performed consistent with the terms of the Agreement.

h. Change in Business

(1) Recipient shall promptly notify the Commission of the occurrence of each of the following:

- (a) A change of address.
- (b) A change in the business name or ownership.
- (c) The existence of any litigation or other legal proceeding affecting the project.
- (d) The occurrence of any casualty or other loss to project personnel, equipment or third parties of a type commonly covered by insurance.
- (e) Receipt of notice of any claim or potential claim against Recipient for patent, copyright, trademark, service mark and/or trade secret infringement that could affect the Commission's rights.

(2) Recipient shall not change or reorganize the type of business entity under which it does business except upon prior written notification to the Commission. A change of business entity or name change requires an

amendment assigning or novating the Agreement to the changed entity. In the event the Commission is not satisfied that the new entity can perform as the original Recipient, the Commission may terminate this Agreement as provided in the termination paragraph.

i. Survival of Terms

It is understood and agreed that certain provisions shall survive the completion or termination date of this Agreement for any reason. The provisions include, but are not limited to:

- “Payments of Funds”
- “Equipment”
- “Change in Business”
- “Disputes”
- “Termination”
- “Audit”
- “Indemnification”
- “License”
- “Fiscal Accounting Requirements”

23. *Certifications & Compliance*

a. Federal, State & Local Laws

Recipient shall comply with all applicable federal, state and local laws, rules and regulations.

b. Nondiscrimination Statement of Compliance

During the performance of this Agreement, Recipient and its subcontractors shall not unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, and denial of family care leave. Recipient and its subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination and harassment. Recipient and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Sections 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this Agreement by reference and made a part of it as if set forth in full. Recipient and its subcontractors shall give written notice

of their obligations under this clause to labor organizations with which they have a collective bargaining or other Agreement.

The Recipient shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this Agreement.

c. Drug Free Workplace Certification

By signing this Agreement, the Recipient hereby certifies under penalty of perjury under the laws of the State of California that the Recipient will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- i) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations as required by Government Code Section 8355(a).
- ii) Establish a Drug-Free Awareness Program as required by Government Code Section 8355(b) to inform employees about all of the following:
 - The dangers of drug abuse in the workplace;
 - The person's or organization's policy of maintaining a drug-free workplace;
 - Any available counseling, rehabilitation, and employee assistance programs; and
 - Penalties that may be imposed upon employees for drug abuse violations.
- iii) Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed project:
 - Will receive a copy of the company's drug-free policy statement;
 - Will agree to abide by the terms of the company's statement as a condition of employment on the project.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both, and the Recipient may be ineligible for any future state awards if the Commission determines that any of the following has occurred: (1) the Recipient has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

d. Recycling Certification

The Recipient shall certify in writing under penalty of perjury, the minimum, if not exact, percentage of recycled content, both post consumer waste and secondary waste as defined in the Public Contract Code, Sections 12161 and 12200, in materials, goods,

or supplies offered or products used in the performance of this Agreement, regardless of whether the product meets the required recycled product percentage as defined in the Public Contract Code, Sections 12161 and 12200. Recipient may certify that the product contains zero recycled content.

e. Child Support Compliance Act (Applicable to California Employers)

For any Agreement in excess of \$100,000, the Recipient acknowledges that:

- i) It recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and
- ii) To the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new employees to the New Hire Registry maintained by the California Employment Development Department.

f. Americans With Disabilities Act

By signing this Agreement, Recipient assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101, et seq.), which prohibits discrimination on the basis of disability, as well as applicable regulations and guidelines issued pursuant to the ADA.

g. Union Activity

By signing this Agreement, the Recipient hereby certifies that Recipient will not use grant funds for any expenses to assist, promote, or deter union organizing. Any Recipient that makes expenditures to assist, promote, or deter union organizing shall maintain records sufficient to show that state funds have not been used for those expenditures. (Government Code Section 16645.2)

EXHIBIT A
PAYMENT REQUEST FORM

STATE OF CALIFORNIA
FINANCIAL STATUS REPORT OR PAYMENT REQUEST

Grant
CEC 211-(a) (Rev. 1/01)

CALIFORNIA ENERGY COMMISSION

Payment Request No.:

Instructions are on the reverse

Recipient (Name and Address)		Type of Request <input type="checkbox"/> Reimbursement <input type="checkbox"/> Status Report Only <input type="checkbox"/> Release Retention		Amount of this Request \$ _____	
		Period Covered by this Request to			
Grant No.	Recipient ID No.	Approved Project Term to		Funding History Funds Requested to Date: \$ _____ Funds Received to Date: \$ _____ Expenses to Date: \$ _____ Funds on Hand: \$ _____ Interest Earned to Date: \$ _____	

ENERGY COMMISSION SHARE	Budget	Expenses this Period	Expenses to Date	Obligations Not Yet Paid	Remaining Balance
Line Item					
Personnel					
Fringe Benefits					
Travel					
Equipment					
Supplies					
Contractual					
Construction					
Other					
Indirect					
TOTAL					

MATCH SHARE	Budget	Expenses this Period	Expenses to Date	Obligations Not Yet Paid	Remaining Balance
Line Item					
Personnel					
Fringe Benefits					
Travel					
Equipment					
Supplies					
Contractual					
Construction					
Other					
Indirect					
TOTAL					

GRAND TOTAL					
--------------------	--	--	--	--	--

RECIPIENT CERTIFICATION		ENERGY COMMISSION USE ONLY (-NS-)	
I certify to the best of my knowledge and belief that this report is correct and complete and all outlays and obligations are for the purposes set forth in the funding Agreement. No grant funds will be used to assist, promote, or deter union organizing.		Amount Authorized	
		Retention Yes _____ No _____	
Signature of Authorized Certifying Officer	Date	Fiscal Year	
Type or Print Name and Title	Phone	Appropriation Code	
ENERGY COMMISSION APPROVALS			
Commission Project Manager	Date		
Commission Program Manager	Date	Retention	
Grants Office	Date	Amount Scheduled	

INSTRUCTIONS

Payment Request No.: Begin with the number 1 on your first payment request and consecutively number each subsequent payment request. The last payment request should include the notation, "Final."

Recipient (Name and Complete Address): Same as "Recipient" on the Grant Agreement. Address should include the city, state, and zip code.

Type of Request: Indicate if this is a "Reimbursement" or "Status Report Only." Be sure to provide backup documentation. If no funds are being requested, check "Status Report Only."

Amount of this Request: This line shows the amount currently being requested. Indicate the amount being requested.

Period Covered by this Report: The time period covered by this request. The first day of the period should be the day after the last day covered by your previous report. Example: 1/14/94 to 3/31/94.

Grant No.: Same as "Grant Number" on the Grant Agreement. This is the eight digit code assigned by the Energy Commission (example 961-93-000).

Recipient ID No.: This space is for an account number or other identifier that may be assigned by the Recipient (optional).

Approved Project Term: This is the entire project period beginning with the date the project starts through the end date. This date should match the "Term" on the Grant Agreement unless you have received a term extension.

Total Funds Requested to Date: Show the total of all funds requested from the Energy Commission prior to this request.

Funds Received to Date: Show the total amount of funds received from the Energy Commission prior to this request. "Funds Requested to Date" minus any retention withheld equals "Funds Received to date".

Total Expenses to Date: Show the total expenses from the beginning of the project through and including the period covered by this report. This amount should be the same as the "Grand Total" expenses to date.

Funds on Hand: This should be filled in only if you have received any advance funds from the Commission. If you have, show the balance of funds received. ("Funds Received to Date" minus "Expenses to Date" equals "Funds on Hand.")

Interest Earned to Date: Show all interest earned on previously advanced funds.

Line Items: The following budget categories apply to all expenditures invoiced.

- **Budget:** Show by line item the budget as shown in the Grant Agreement.
- **Expenses this Period:** Show by line item the actual payments made by the Recipient during the period covered by this report.
- **Expenses to Date:** Show by line item the cumulative total of all expenses from the beginning of the project through and including the period covered by this report.
- **Obligations Not Yet Paid:** Show by line item all funds obligated on purchase orders, contracts, etc. for which you have received an invoice but have not yet paid.
- **Remaining Balance:** Show by line item the funds available for expenses or obligations. "Budget" minus "Expenses to Date" minus "Obligations Not Yet Paid" equals "Remaining Balance."

Certification: Name, title and signature of authorized certifying official (usually the grant Recipient's project manager).

Submit original and one copy to:

California Energy Commission
Accounting Office
1516 Ninth Street, MS # 2
Sacramento, CA 95814

Exhibit 6: *PIER Terms and Conditions*

TERMS AND CONDITIONS

PUBLIC INTEREST ENERGY RESEARCH GRANTS

AWARD # - -



TERMS AND CONDITIONS

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TERMS AND CONDITIONS

1. *Grant Agreement*

This project is being funded with a grant from the California Energy Commission (Commission). Funding for this project was authorized by Senate Bill No. 90, Chapter 905, Statutes of 1997, and consists of funds from the Public Interest Research, Development, and Demonstration Fund.

Program refers to the entire effort undertaken and planned by the Recipient including the work co-funded by the Commission. The program may coincide with or extend beyond the Agreement period. **Project** refers to the work elements of the program. Typically, there are distinct projects within the program being paid for by the Commission under this Agreement.

This Agreement is comprised of the grant funding award, the Terms and Conditions, and all attachments. These Terms and Conditions are standard requirements for Public Interest Energy Research (PIER) grant awards. The Commission may impose special conditions in this grant Agreement which address the unique circumstances of this project. Special conditions that conflict with these standard provisions take precedence. Any special conditions are attached to this Agreement.

The Recipient shall sign all six copies of this Agreement and return five signed packages to the Commission's Grants and Loans Office within 30 days. Failure to meet this requirement may result in the forfeiture of this award. When all required signatures are obtained, an executed copy will be returned to the Recipient.

Commission-funded work and/or the expenditure of Commission funds must occur within the term of this Agreement. However, the Commission cannot authorize any payments until all parties sign this Agreement.

2. *Attachments and References*

The following are attached and hereby expressly incorporated into this Agreement.

- Work Statement
- Budget
- Resolution of the Recipient or Local Jurisdiction Governing Body (if applicable)
- Resolution of the California Energy Commission
- Content and Format of Progress Reports
- Format for Final Reports
- Confidentiality Exhibit (if applicable)
- Intellectual Property Exhibit (if applicable)
- Special Conditions (if applicable)

The Office of Management and Budget (OMB) Circulars and/or federal regulations identified below are incorporated by reference as part of this Agreement. These Terms and Conditions and any Special Conditions take precedence over the circulars and/or regulations. The OMB Circulars and federal regulations are used to help guide the administration of the award when questions arise during the course of performance of the award. The Commission reserves the right to use as much or as little of each circular or regulation it deems necessary to administer the award in good faith and consistent with prudent fiscal management of public funds. OMB Circulars may be accessed on the OMB web site at www.whitehouse.gov/omb/circulars/index.html or by calling the Office of Administration, Publications Office, at (202) 395-7332.

- Common Rule for Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments
- OMB Circular A-110: Uniform Administrative Requirements for Grants and Agreements with Institutions of Higher Education, Hospitals, and Other Non-Profit Organizations (also applicable to private entities)
- 10 CFR Part 600: DOE Financial Assistance Regulations (www.pr.doe.gov/f600toc.html)
- OMB Circular A-87: Cost Principles for State, Local and Tribal Governments
- OMB Circular A-21: Cost Principles Applicable to Grants, Contracts, and Other Agreements with Institutions of Higher Education (public and private colleges and universities)
- OMB Circular A-122: Cost Principles Applicable to Grants, Contracts, and Other Agreements with Non-Profit Organizations (non-profit organizations and individuals, except for those specifically exempted)
- OMB Circular A-133: Audits of States, Local Governments, and Non-Profit Organizations
- Title 48 CFR, Ch. 1, Subpart 31.2: Contracts with Commercial Organizations (Supplemented by 48 CFR, Ch. 9, Subpart 931.2 for Department of Energy grants) (commercial firms and certain non-profit organizations) (www.access.gpo.gov/nara/cfr/cfr-table-search.html)

3. *Funding Limitations*

Any federal, state, and local laws and regulations applicable to your project not expressly listed in this Agreement are incorporated herein as part of this Agreement.

4. *Due Diligence*

The Recipient is required to take timely actions which, taken collectively, move this project to completion. The Commission Project Manager will periodically evaluate the schedule for completion of Work Statement tasks. If the Commission Project Manager determines (1) the Recipient is not being diligent in completing the tasks in the Work Statement or (2) the time remaining in the funding award is insufficient to complete all project work tasks not later than the Agreement term date, the Project Manager may recommend to the Policy Committee of the Commission (Committee) that this Agreement be terminated, and the Committee may, without prejudice to any of its remedies, terminate this Agreement.

5. *Products*

Products are defined as any tangible item specified in the Work Statement. Unless otherwise directed, draft copies of all products identified in the Work Statement shall be submitted to the Commission's Accounting Office at the address below. The Accounting Office will forward products to the Commission Project Manager for review and comment. The Recipient will submit an original and two copies of the final version of all products to the Accounting Office. If the Commission Project Manager determines a product is substandard, given the description and intended use of the product as described in the Work Statement and the grant application, the Commission Project Manager may refuse to authorize payment for the product and any subsequent products that rely upon or are based upon that product under this Agreement.

California Energy Commission
Accounting Office
PIER Grant Program
1516 Ninth Street, MS-2
Sacramento, CA 95814

6. *Reports*

a. Submission of Reports

All reports will be submitted to the Accounting Office at the address listed in Section 5 above.

b. Progress Reports

The Recipient shall prepare progress reports. They are due to the Commission within 30 days after the end of the reporting period. The Recipient shall prepare progress reports which summarize all grant activities conducted by the Recipient for the reporting period, including an assessment of the ability to complete the project within the current budget and any anticipated cost overruns. The Commission Project Manager will specify the report format, contents, and number of copies to be submitted. See the Attachment 1 titled "Content and Format of Progress Reports" for more information.

c. Final Reports

An outline for the final report shall be submitted for review and approval by the Commission Project Manager no later than 90 days prior to the end of the Agreement term unless another timeframe is indicated in the Special Conditions or Work Statement (see Attachment 2, Final Report Format). The final report shall contain a section describing any future intent of the Recipient to maintain or further develop the project. The Commission Project Manager will review the outline and provide comments, if any. The Recipient will incorporate applicable comments and begin work on the draft final report.

The draft final report shall be submitted to the Commission Project Manager for review and approval no later than 60 days prior to the end of the Agreement term unless another timeframe is indicated in the Special Conditions or Work Statement. The Commission Project Manager will review the draft and provide comments, if any. The Recipient will incorporate applicable comments and begin work on the final report.

The final report shall be submitted no later than 15 days prior to the end of the Agreement term unless another timeframe is indicated in the Special Conditions or Work Statement.

Upon receipt of the final report, the Commission Project Manager shall ensure that all work has been satisfactorily completed. The Payment Request for the final payment (including any retention) may only be submitted after the final report is completed and the Commission Project Manager has verified satisfactory completion of the work.

d. Rights in Reports

The Commission reserves the right to use and reproduce all reports and data produced and delivered pursuant to this Agreement, and reserves the right to authorize others to use or reproduce such materials. Each report becomes the property of the Commission.

e. **Failure to Comply with Reporting Requirements**

Failure to comply with the reporting requirements contained in this award will be considered a material noncompliance with the terms of the award. Noncompliance may result in withholding of future payments, suspension or termination of the current award, and withholding of future awards.

7. *Legal Statement on Reports and Products*

No product or report produced as a result of work funded by this program shall be represented to be endorsed by the Commission, and all such products or reports shall include the following statement:

LEGAL NOTICE

This document was prepared as a result of work sponsored by the California Energy Commission. It does not necessarily represent the views of the Energy Commission, its employees, or the State of California. The Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this document; nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Commission nor has the Commission passed upon the accuracy of the information in this report.

8. *Amendments*

Changes to the Work Statement, changes to specific line items in the budget, or both, may be made under certain conditions. Such changes must not alter the original scope or purpose of the project or program as proposed in the grant application. Such changes must not appreciably affect the value of the project or program. The Recipient may reallocate between budget line items up to 15 percent (15%) of the total budget, with prior written notification to the Commission Project Manager. Work Statement changes and/or cumulative transfers among budget line items that exceed 15 percent of the grant award require advance written approval of the Commission Project Manager and the PIER Program Team Lead. Changes to add new line item categories or travel also require advance written approval as well as changes to key personnel or key subcontractors (see Section 10, Key Personnel and Key Subcontractors). All requests must be submitted directly to the Commission Project Manager in writing and include a description of the proposed change, revised attachment(s), and the reasons for the change. The Commission Project Manager shall approve these requests in writing. Approved changes shall become part of this Agreement.

9. *Contracting and Procurement Procedures*

This section provides general requirements for an agreement between the Recipient and a third party ("subcontractor").

The Recipient is required, where feasible, to employ contracting and procurement practices that promote open competition for all goods and services needed to complete this project. Recipient shall obtain price quotes from an adequate number of sources for all subcontracts. Additional subcontracting criteria are specified in the applicable OMB Circulars and/or federal regulations incorporated by reference in this Agreement.

Upon request, the Recipient must submit to the Commission Project Manager a copy of all solicitations for services or products required to carry out the terms of this Agreement, copies of the proposals or bids received, and copies of subcontracts executed. If a specific subcontractor was identified in the original grant application and the grant was evaluated based in part on this subcontractor's qualifications, then prior written approval from the Commission Project Manager is required before substituting a new subcontractor. (See Key Personnel and Key Subcontractors.)

The Recipient is responsible for handling all contractual and administrative issues arising out of or related to any subcontracts it enters into under this Agreement.

All subcontracts must incorporate all of the following:

- A clear and accurate description of the material, products, or services to be procured as well as a detailed budget and timeline.
- Provisions which allow for administrative, contractual, or legal remedies in instances where subcontractors violate or breach contract terms, and provide for such sanctions and penalties as may be appropriate.
- Provisions for termination by the Recipient including termination procedures and the basis for settlement.
- Language conforming to the "Nondiscrimination" provision in this Agreement.
- Any additional requirements specified in the OMB Circulars and/or federal regulations incorporated by reference in this Agreement.
- The Standard of Performance provisions specified in this Agreement.
- Audit provisions regarding record retention specified in this Agreement.
- Language conforming to the "Indemnification" provision in this Agreement.
- Language conforming to the "Intellectual Property" provisions in this Agreement.

- Flowdown provisions that should be included in subcontracts are listed below. Review each provision for applicability to each situation.
 - Travel and Per Diem
 - Equipment
 - Standard of Performance
 - Disputes
 - Termination
 - Confidentiality
 - Intellectual Property Items Developed Prior to this Agreement
 - Recordkeeping, Cost Accounting, and Auditing
 - Rights of Parties Regarding Intellectual Property
 - General Provisions

Nothing contained in this Agreement or otherwise, shall create any contractual relation between the Commission and any subcontractors, and no subcontract shall relieve the Recipient of its responsibilities and obligations hereunder. The Recipient agrees to be as fully responsible to the Commission for the acts and omissions of its subcontractors or persons either directly or indirectly employed by any of them as it is for the acts and omissions of persons directly employed by the Recipient. The Recipient's obligation to pay its subcontractors is an independent obligation from the Commission's obligation to make payments to the Recipient. As a result, the Commission shall have no obligation to pay or to enforce the payment of any monies to any subcontractor.

Recipient shall be responsible for establishing and maintaining contractual agreements with and reimbursement of each subcontractor for work performed in accordance with the terms of this Agreement.

Replacement or substitution of all non-key subcontractors is permitted with reasonable advance written notification to the Commission Project Manager.

Each subcontract shall contain provisions similar to those of Clause 24, "Rights of Parties Regarding Intellectual Property", subparagraph f, "Limitations on Contractor Disclosure of Grant Data, Information, Reports and Records," related to the confidentiality of Commission data and its nondisclosure by Recipient.

All subcontracts entered into pursuant to this Agreement shall be subject to examination and audit by the Bureau of State Audits for a period of three years after final payment under this Agreement.

Each subcontract to which the Commission has consented shall contain a provision that further assignments shall not be made to any third or subsequent tier subcontractor without additional advance written consent of the Commission.

Failure to comply with the above requirements may result in the termination of this Agreement.

10. *Key Personnel and Key Subcontractors*

a. Key Personnel

Key personnel are employees of the Recipient who are critical to the outcome of the project. For example, they may have expertise in the particular field or have experience that is not available from another source. Replacing these individuals may affect the outcome of the project. Key personnel, listed in the Budget exhibit, may not be substituted without the Commission Project Manager's approval. Such approval shall not be unreasonably withheld. Recipient may substitute all other personnel, with reasonable advance notification made to the Commission Project Manager.

b. Key Subcontractors

Key subcontractors are subcontractors or vendors to the Recipient who are critical to the outcome of the project. As with key personnel, key subcontractors may have expertise in the particular field or have experience that is not available from another source. Replacing these subcontractors may affect the outcome of the project. An employee of the Recipient's subcontractor or vendor may also qualify as "key." Key subcontractors, listed in the Budget exhibit, may not be substituted without the Commission Project Manager's approval. Such approval shall not be unreasonably withheld. Recipient may substitute all other subcontractors, with reasonable advance notification made to the Commission Project Manager. Replacement of key subcontractors is subject to the "Contracting and Procurement Procedures" section contained within these terms and conditions.

11. *Bonding and Insurance*

The Recipient will comply with all bonding and insurance requirements relating to bid guarantees, performance bonds, and payment bonds without regard to the dollar value of the subcontract(s) in accordance with applicable federal and state laws and regulations.

12. *Permits and Clearances*

The Recipient is responsible for ensuring all necessary permits and environmental documents are prepared and clearances are obtained from the appropriate agencies.

13. *Equipment*

Title to equipment acquired by the Recipient with grant funds shall vest in the Recipient. The Recipient shall use the equipment in the project or program for which it was acquired as long as needed, whether or not the project or program continues to be supported by grant funds and shall not encumber the property without Commission Project Manager approval. When no

longer needed for the original project or program, the Recipient shall contact the Commission Project Manager for disposition instructions.

Recipient should refer to the applicable OMB Circulars and/or federal regulations incorporated by reference in this Agreement for additional equipment requirements.

14. Termination

a. Purpose

The parties agree that because the Commission is a state entity and provides funding on behalf of all Californian ratepayers, it is necessary for the Commission to be able to terminate, at once, upon the default of Recipients. Recipient specifically acknowledges that the termination of the Agreement by the Commission under the terms set forth below is an essential term of the Agreement, without which the Commission would not enter into the Agreement. Recipient further agrees that upon any of the events triggering termination of the Agreement by the Commission, the Commission has the right to terminate the Agreement, and it would constitute bad faith of the Recipient to interfere with the immediate termination of the Agreement by the Commission.

b. Breach

The Commission shall provide the Recipient written notice of intent to terminate due to Recipient's breach. Recipient will have 15 calendar days to fully perform or cure the breach. In the event Recipient does not cure the breach within 15 days, the Commission may, without prejudice to any of its other remedies, terminate this Agreement upon five (5) calendar days written notice to Recipient. In such event, Commission shall pay Recipient only the reasonable value of the work satisfactorily performed by Recipient, as may be agreed upon by the parties or determined by a court of law, but not in excess of the maximum amount payable under this Agreement.

c. For Cause

The Commission may, for cause, and at its option, terminate this Agreement upon giving thirty calendar (30) days, advance written notice to Recipient. In such event, Recipient agrees to use all reasonable efforts to mitigate its expenses and obligations. Commission will pay Recipient for work performed and expenses incurred within the terms of the work statement and which were satisfactorily performed prior to and within 30 days after such notice of termination that could not by reasonable efforts of the Recipient have been avoided, but not in excess of the maximum amount payable under this Agreement.

The term “for cause” includes, but is not limited to, the following reasons:

- Partial or complete loss of match funds.
- Reorganization to a business entity unsatisfactory to the Commission.
- Retention or hiring of subcontractors, or replacement, or addition of key personnel that fail to perform to the standards and requirements of this Agreement.
- Recipient is not able to pay its debts as they become due and/or Recipient is in default of an obligation that impacts Recipient’s ability to perform under this Agreement.
- Significant changes in State or Energy Commission policy such that the work or product being funded would not be supported by the Commission.

d. Gratuities

The Commission may, by written notice to Recipient, terminate the right of Recipient to proceed under this Agreement if it is found, after notice and hearing by Commission or by the Executive Director of the Energy Commission or his duly authorized representative, that gratuities were offered or given by Recipient, or any agent or representative of Recipient, to any officer or employee of the Commission, with a view toward securing a contract or securing favorable treatment with respect to awarding or amending or making a determination with respect to performance of such Agreement.

In the event this Agreement is terminated as provided herein, Commission shall be entitled to (1) pursue the same remedies against Recipient as it could pursue in the event of the breach of the Agreement by Recipient, and (2) exemplary damages in an amount which shall be not less than three nor more than ten times the cost incurred by Recipient in providing any such gratuities to any such officer or employee, as a penalty, in addition to any other damages to which it may be entitled by law.

The rights and remedies of Commission provided in this clause shall not be exclusive and are in addition to any other rights and remedies provided by law or under this Agreement.

e. Advantage

Recipient, team member or subcontractors shall not hire, contract with, or otherwise commit themselves to an advantageous economic contract with the Commission's Contractor/subcontractor who evaluated Recipient’s proposal. The Commission reserves the right to cancel the Agreement.

15. *Travel and Per Diem*

For purposes of payment, Recipient's headquarters shall be considered the location of the Recipient's office where the employees assigned responsibilities for this award are permanently assigned. Travel expenditures not listed in this section cannot be reimbursed.

Travel not listed in the Budget section of this Agreement shall require prior written authorization from the Commission Project Manager. Recipient shall be reimbursed for authorized travel and per diem up to, but not to exceed, the rates allowed nonrepresented state employees. A copy of the current allowable travel reimbursement rates can be obtained by contacting the Commission's Grants and Loans Office at (916) 654-4381.

Travel expense claims must detail expenses using the allowable rates, and Recipient must sign and date travel expense claim before submitting the travel expense claim to the Commission for payment. Expenses must be listed by trip including dates and times of departure and return. Travel expense claims supporting receipts and expense documentation shall be attached to the Recipient's Payment Request. A vehicle license number is required when claiming mileage, parking, or toll charges. Questions regarding allowable travel expenses or per diem should be addressed to the Commission Project Manager.

16. *Standard of Performance*

- a. Recipient, its subcontractors and their employees in the performance of Recipient's work under this Agreement shall be responsible for exercising the degree of skill and care required by customarily accepted good professional practices and procedures used in scientific and engineering research fields.
- b. The failure of a project to achieve the technical or economic goals stated in the Work Statement is not a basis for the Commission to determine that the work is unacceptable, unless the work conducted by the Recipient or its subcontractors is deemed by the Commission to have failed the foregoing standard of performance.
- c. In the event that Recipient or its subcontractor fails to perform in accordance with the foregoing standard of performance, the Commission Project Manager and the Contractor Project Manager shall seek to negotiate in good faith an equitable resolution satisfactory to both parties. If such a resolution cannot be reached, the parties shall work through the Commission's dispute resolution process described in the Disputes clause herein.
- d. Nothing contained in this section is intended to limit any of the rights or remedies which the Commission may have under law.

17. Payment of Funds

a. Payment Requests

Unless indicated otherwise in Special Conditions, the Recipient may request payment from the Commission at any time during the term of this Agreement, but no more frequently than monthly, although it is preferred that payment requests be submitted with the quarterly progress reports.

Payments will generally be made on a reimbursement basis for Recipient's expenditures, i.e., after the Recipient has paid for a service, product, supplies, or other approved budget item. No reimbursement for food or beverages shall be made other than allowable per diem charges.

The Commission, at its sole discretion, may honor advance payment requests subject to special conditions specified by the Commission's Grants and Loans Office.

Funds in this award have a limited period in which they must be expended. All Recipient expenditures must occur prior to the end of the term of this Agreement.

b. Payment Request Format

A request for payment shall consist of, but is not limited to:

- 1) An invoice that is a **list** of actual expenses incurred during the billing period. Backup information is not required at the time of invoice submittal, but will be required at time of audit (see Audit clauses). Unless specified otherwise in Special Conditions, the invoice list must include documentation of expenditures consistent with the grant Budget, as follows:
 - a) Date prepared, grant number, Recipient's Federal ID number, and billing period;
 - b) Recipient's actual labor expenditures, including hourly labor rates by individual, hours worked, and benefits (fully loaded rates may only be used if fully loaded rates are included in the grant Budget);
 - c) Operating expenses, including travel, equipment, supplies, and other;
 - d) Subcontractor invoices;
 - e) Overhead/indirect;
 - f) Match fund expenditures, and
 - g) By Budget line item (cost component) category, list budgeted amount, billed to date, current billing, and balance of funds.
- 2) A progress report that documents evidence of progress, which includes written progress reports and products prepared by the Recipient as detailed in the Work Statement.

The Commission will accept computer-generated or electronically transmitted invoices without backup documentation provided that the Recipient sends a hardcopy the same day.

Recipient shall submit all invoices to the following address:

California Energy Commission
Accounting Office
PIER Grant Program
1516 Ninth Street, MS-2
Sacramento, CA 95814

c. Release of Funds

Each invoice is subject to Commission Project Manager approval. The Commission Project Manager will not process any payment request during the Agreement term if the following conditions have not been met:

- All required reports have been submitted and are satisfactory to the Commission Project Manager.
- All applicable special conditions have been met.
- All appropriate permits or permit waivers from governmental agencies have been issued to the Recipient and copies have been received by the Commission Project Manager.
- All products due have been submitted and are satisfactory to the Commission Project Manager.
- Other prepayment conditions as may be required by the Commission Project Manager have been met. Such conditions will be specified in writing ahead of time, if possible.

Payments shall be made to the Recipient only for undisputed invoices. An undisputed invoice is an invoice executed by the Recipient for project expenditures, that meets all payment conditions of the Agreement, and for which additional evidence is not required to make payment. The Commission shall give written notice to Recipient within 15 working days of receipt of a disputed invoice by using State of California Form 209. If the invoice is not disputed within 15 working days, the invoice is presumed to be valid, but is subject to audit and verification.

d. Indirect Costs/Overhead/Facilities and Administration Costs (F&A)

If the Recipient has an approved indirect cost/overhead/F&A rate by their cognizant Federal Audit Agency, Recipient's indirect costs will be reimbursed in accordance with those rates.

e. Retention

It is the Commission's policy to retain 10 percent of any payment request or 10 percent of the total Commission award at the end of the project. After the project is complete the Recipient must submit a completed payment request form requesting release of the retention. The Commission Project Manager will review the project file and, when satisfied that the terms of the funding Agreement have been fulfilled, will authorize release of the retention.

f. State Controller's Office

Payments are made by the State Controller's Office.

18. *Recordkeeping, Cost Accounting, and Auditing*

a. Cost Accounting

Recipient agrees to keep separate, complete, and correct accounting of the costs involved in completing the grant and match funded (if any) portion of this project. The Commission or its agent shall have the right to examine Recipient's books of accounts at all reasonable times to the extent and as is necessary to verify the accuracy of Recipient's reports.

b. Accounting Procedures

The Recipient's costs shall be determined on the basis of the Recipient's accounting system procedures and practices employed as of the effective date of this Agreement, provided that the Recipient shall use generally accepted accounting principles and cost reimbursement practices. The Recipient's cost accounting practices used in accumulating and reporting costs during the performance of this Agreement shall be consistent with the practices used in estimating costs for any proposal to which this Agreement relates; provided that such practices are consistent with the other terms of this Agreement and provided, further, that such costs may be accumulated and reported in greater detail during performance of this Agreement. The Recipient's accounting system shall distinguish between direct costs and indirect costs. All costs incurred for the same purpose, in like circumstances, are either direct costs only or indirect costs only with respect to costs incurred under this Agreement.

c. Allowability of Costs

1) Allowable Costs

The costs for which the Recipient shall be reimbursed under this Agreement include all costs, direct and indirect, incurred in the performance of work that are identified in the grant Budget. Costs must be incurred within the term of the Agreement. Factors to be considered in determining whether an individual item of cost is allowable include (i) reasonableness of the item, (ii) allocability of the item to the work, (iii) applicable federal OMB circulars and/or federal regulations incorporated by reference in this Agreement, and (iv) the other terms and conditions of this Agreement.

2) Unallowable Costs

The following is a description of some specific items of cost that are unallowable; provided, however, that the fact that a particular item of cost is not included shall not mean that it is allowable. Details concerning the allowability of costs are available from the Commission's Accounting Office.

a) Profit or Fees, Contingency Costs, Imputed Costs, Fines and Penalties, Losses, and Excess Profit Taxes are unallowable.

b) The Commission will pay for state or local sales or use taxes on expenditures. The State of California is exempt from Federal excise taxes.

3) Except as provided for in this Agreement, Recipient shall use the federal OMB circulars and/or federal regulations incorporated by reference in this Agreement when determining allowable and unallowable costs.

d. Audit Rights

Recipient shall maintain books, records, documents, and other evidence, based on the procedures set forth above, sufficient to reflect properly all costs claimed to have been incurred in performing this Agreement. The Commission, an agency of the state or, at the Commission's option, a public accounting firm designated by Commission, may audit such accounting records at all reasonable times with prior notice by Commission. Commission shall bear the expense of such audits. It is the intent of the parties that such audits shall ordinarily be performed not more frequently than once every twelve (12) months during the performance of the work and once at any time within three (3) years following payment by Commission of

the Recipient's final invoice. However, performance of any such interim audits by the Commission does not preclude further audit.

Recipient agrees that the Commission, the Department of General Services, the Bureau of State Audits, or their designated representative shall have the right to review and to copy any records and supporting documentation pertaining to the performance of this Agreement. Recipient agrees to maintain such records for possible audit for a minimum of three (3) years after final payment, unless a longer period of record retention is stipulated. Recipient agrees to allow the auditor(s) access to such records during normal business hours and to allow interviews of any employees who might reasonably have information related to such records. Further, Recipient agrees to include a similar right of the state to audit records and interview staff in any subcontract related to performance of this Agreement.

e. Refund to Commission

If Commission determines, that any invoiced and paid amounts exceed the actual allowable incurred costs, Recipient shall repay such amounts to Commission within thirty (30) days of request or as otherwise agreed by the Commission and Recipient. If Commission does not receive such repayments, the Commission shall be entitled to withhold further payments to the Recipient or seek repayment from the Recipient.

f. Audit Cost

The cost of the audit shall be borne by the Commission except when the results of the audit reveal an error detrimental to the Commission exceeding more than ten percent (10%) or \$5,000 (whichever is greater) of 1) the amount audited, or 2) if a royalty audit, the total royalties due in the period audited. Recipient shall pay the refund as specified in "e. Refund to Commission," and Recipient agrees to reimburse Commission for reasonable costs and expenses incurred by the Commission in conducting such audit.

g. Match or Cost Share (match)

If the Budget includes a match share requirement, the Recipient's commitment of resources, as described in this Agreement, is a required expenditure for receipt of Commission funds. Grant funds will be released only if the required match percentages are expended. The Recipient must maintain accounting records detailing the expenditure of the match (actual cash and in-kind services) and report on match share expenditures on the Recipient's request for payment.

19. Indemnification

The Recipient agrees to indemnify, defend, and save harmless the state, its officers, agents, and employees from any and all claims and losses accruing or resulting to Recipient and to any and all contractors, subcontractors, materialmen, laborers, and any other person, firm, or corporation furnishing or supplying work, services, materials, or supplies in connection with the performance of this Agreement, and from any and all claims and losses accruing or resulting to any person, firm, or corporation who may be injured or damaged by the Recipient in the performance of this Agreement.

20. Disputes

In the event of a dispute or grievance between the Recipient Project Manager and Commission Project Manager, the parties shall use any or all of the following procedures:

a. Commission Dispute Resolution

If the Commission Project Manager and the Recipient Project Manager cannot resolve a dispute or grievance, Recipient Project Manager and Commission Project Manager shall each prepare a package in writing stating the issues in dispute, the legal authority or other basis for their respective positions and the remedy sought. The packages must be submitted to the Commission PIER Dispute Resolution Committee. The Commission Project Manager will notify the Recipient Project Manager of the current Committee members. The Committee shall make a determination on the problem within ten (10) working days after receipt of the package.

If Recipient disagrees with the Committee's decision, Recipient may appeal to the full Commission at a regularly scheduled business meeting. The Committee will provide the Recipient with the current procedures for placing the appeal on a Commission Business Meeting Agenda.

Recipient shall continue with its responsibilities under this Agreement during any dispute.

b. Mutual Agreement for Arbitration

Should the Commission's Dispute Resolution procedure described above fail to resolve a dispute or grievance to the satisfaction of the Recipient, either party may seek to have the dispute or grievance resolved through binding arbitration. Both parties must consent before submitting the dispute to arbitration. The arbitration proceeding shall take place in Sacramento County, California, and shall be governed by the commercial arbitration rules of the American Arbitration Association (AAA) in effect on the date the arbitration is initiated. The dispute or grievance shall be resolved by one (1) arbitrator who is an expert in the particular field of the dispute or grievance. The

arbitrator shall be selected in accordance with the aforementioned commercial arbitration rules. If arbitration is mutually decided by the parties, arbitration is in lieu of any court action and the decision rendered by the arbitrator shall be final (not appealable to a court through the civil process). However, judgement may be entered upon the arbitrator's decision and is enforceable in accordance with the applicable law in any court having jurisdiction over this Agreement. The demand for arbitration shall be made no later than six (6) months after the date of the termination of this Agreement, irrespective of when the dispute or grievance arose, and irrespective of the applicable statute of limitations for a suit based on the dispute or grievance.

The cost of arbitration shall be borne by the parties as follows:

- 1) The AAA's administrative fees shall be borne equally by the parties;
- 2) The expense of a stenographer shall be borne by the party requesting a stenographic record;
- 3) Witness expenses for either side shall be paid by the party producing the witness;
- 4) Each party shall bear the cost of its own travel expenses;
- 5) All other expenses shall be borne equally by the parties, unless the arbitrator apportions or assesses the expenses otherwise as part of his or her award.

At the option of the parties, any or all of these arbitration costs may be deducted from any balance of grant funds. Both parties must agree, in writing, to utilize grant funds to pay for arbitration costs.

If the parties do not mutually agree to binding arbitration, the sole forum to resolve the dispute is State court.

21. *Workers' Compensation Insurance*

- a. Recipient hereby warrants that it carries Worker's Compensation Insurance for all of its employees who will be engaged in the performance of this Agreement, and agrees to furnish to the Commission Project Manager satisfactory evidence of this insurance at any time the Commission Project Manager may request.
- b. If Recipient is self-insured for worker's compensation, it hereby warrants such self-insurance is permissible under the laws of the State of California and agrees to furnish to the Commission Project Manager satisfactory evidence of this insurance at any time the Commission Project Manager may request.

22. *Confidentiality*

a. Determination

The Commission Executive Director makes the final determination of confidentiality. In the event there is a disagreement over the items to be delivered under the Agreement, the parties shall use the Disputes clause. Those items to be delivered as confidential shall be subject to the Commission Executive Director's determination of confidentiality. If the Recipient wishes to appeal the Executive Director's determination, the appeal shall be made to the full Commission. If the Recipient disagrees with this determination, the Recipient may seek judicial review as per Title 20 CCR 2501, et seq.

The Recipient has not identified any confidential or proprietary items to be delivered under this Agreement.

b. Public and Confidential Products

Only those items specifically listed in Exhibit __ or in a subsequent determination of confidentiality qualify as confidential products. All products including, but not limited to, progress reports, task products and the Final Report shall not contain confidential information except when the Commission Project Manager and the Recipient deem it necessary to include confidential information in a product. In such event, the Recipient shall prepare the deliverable in two separate volumes, one for public distribution and one to be maintained in the Commission's confidential records.

c. Future Confidential Information

The Recipient and the Commission agree that during this Agreement, it is possible that the Recipient may develop additional data or information that the Recipient considers to be protectable as confidential information. The Commission Project Manager shall provide a copy of the Commission Application for Confidential Designation to the Recipient Project Manager. Recipient must list all items and information along with justification for confidentiality and submit the application to the Commission Project Manager. The Commission Executive Director makes the final determination of confidentiality. Such subsequent determinations will be added to Exhibit __.

d. Identifying and Submitting Confidential Information

All confidential information submitted by the Recipient shall be marked "Confidential" on each document containing the confidential information and delivered in a sealed package to the Commission Grants and Loans Officer. The Commission Grants and Loans Officer will notify the Commission Project Manager that the confidential information has been received and is in the Grants and Loans

Office for review. The confidential information will only be available to those persons authorized by the Executive Director.

23. **Definitions**

- a. **Copyrightable Work** means any copyrighted work as defined under U.S. copyright law to which the Performing Institution has acquired title, that is first created by Recipient or by a Performing Institution in the performance of this Agreement and is not a scholarly work.
- b. **Licensed Product** means any product commercialized by a Licensee that embodies or utilizes a Subject Invention, Copyrightable Work or Project Related Products.
- c. **Licensee** means the organization (or its affiliates, joint venture or sublicensee) that develops any Subject Invention, Copyrightable Work or Project Related Products into a commercial product that is made available to the public in the marketplace. Licensee may be the Recipient, a Performing Institution or a company to whom the Recipient or the Performing Institution licenses commercial rights.
- d. **Performing Institution** means (i) any non-UC not-for-profit organization, for-profit organization, or Federal laboratory, or (ii) any part of University of California, such as a campus or UC-managed Department of Energy Laboratory performing research under this Agreement.
- e. **Project** refers to the entire effort undertaken and planned by the Recipient and consisting of the work co-funded by the Commission. The project may coincide with or extend beyond the Agreement Term.
- f. **Project-Related Products ("PRP")** means all tangible research products first made by Recipient or a Performing Institution in the performance of this Agreement, but not a Subject Invention nor a Copyrightable Work.
- g. **Subject Invention** means any patentable invention or discovery that is either:
 - 1) Conceived and first actually reduced to practice in the performance of this Agreement;
 - 2) Conceived in the performance of this Agreement elected by the Commission pursuant and reduced to practice within 42 months following the termination or expiration of this Agreement; or
 - 3) Conceived prior to and reduced to practice in the performance of this Agreement, provided that such conception was incorporated into the Project and the parties mutually agree in writing to include such conception.

24. *Intellectual Property Items Developed Prior to This Agreement*

- a. The Commission makes no claim to intellectual property that existed prior to this Agreement and was developed without Commission funding.
- b. The Recipient has not identified any pre-existing intellectual property.

25. *Rights of Parties Regarding Intellectual Property*

- a. Commission's Rights in Products

Products and reports specified for delivery to the Commission under this Agreement shall become the property of the Commission. The Commission may use, publish, and reproduce the products and reports subject to the provisions of subparagraph c.

- b. Rights in Technical, Generated, and Product Data

- 1) Recipient's Rights

All data (i.e., technical, generated and product data) produced under this Agreement shall be the property of the Recipient, limited by the license retained by the Commission in 2) below, and the rights the Commission has in products specified above in a).

- 2) Commission's Rights

Recipient shall provide the Commission with a copy of all technical, generated and product data produced under the Agreement, when requested. Recipient does not have to copy and submit data the Commission Project Manager has identified as being unusable to the Commission and the PIER program. For instance, some data may not warrant routine copying and shipping because the raw data is too disaggregated or voluminous for practical application. Retention of such data at the Recipient's facility for inspection, review and possible copying by the Project Manager is expected to be a more efficient use of Commission staff and the Recipient's time and efforts.

For all data (technical, generated and product data) produced under this Agreement, the Commission retains a no-cost, non-exclusive, non-transferable, irrevocable, royalty-free, worldwide, perpetual license to use, publish, translate, produce and to authorize others to produce, translate, publish and use the data, subject to the provisions of subparagraph c.

c. Limitations on Commission Disclosure of Recipient's Confidential Records

- 1) Data provided to the Commission by Recipient, which data the Commission has not already agreed to keep confidential and which Recipient seeks to have designated as confidential, or is the subject of a pending application for confidential designation, shall not be disclosed by the Commission except as provided in Title 20 CCR Sections 2506 and 2507 (or as they may be amended), unless disclosure is ordered by a court of competent jurisdiction.
- 2) It is the Commission's intent to use and release project results such as products and data in a manner calculated to further PIER while protecting proprietary or patentable interests of the parties. Therefore, the Commission agrees not to disclose confidential data or the contents of reports containing data considered by Recipient as confidential, without first providing a copy of the disclosure document for review and comment by Recipient. Recipient shall have no less than 10 working days for review and comment and, if appropriate, to make an application for confidential designation on some or all of the data. The Commission shall consider the comments of the Recipient and use professional judgment in revising the report, information or data accordingly.

d. Exclusive Remedy

In the event the Commission intends to publish or has disclosed data the Recipient considers confidential, the Recipient's exclusive remedy is a civil court action for injunctive relief. Such court action shall be filed in Sacramento County, Sacramento, California.

e. Waiver of Consequential Damages

IN NO EVENT WILL THE ENERGY COMMISSION BE LIABLE FOR ANY SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES BASED ON BREACH OF WARRANTY, BREACH OF CONTRACT, NEGLIGENCE, STRICT TORT, OR ANY OTHER LEGAL THEORY FOR THE DISCLOSURE OF RECIPIENT'S CONFIDENTIAL RECORDS, EVEN IF THE ENERGY COMMISSION HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE. DAMAGES THAT THE ENERGY COMMISSION WILL NOT BE RESPONSIBLE FOR INCLUDE, BUT ARE NOT LIMITED TO, LOSS OF PROFIT; LOSS OF SAVINGS OR REVENUE; LOSS OF GOODWILL; LOSS OF USE OF THE PRODUCT OR ANY ASSOCIATED EQUIPMENT; COST OF CAPITAL; COST OF ANY SUBSTITUTE EQUIPMENT, FACILITIES, OR SERVICES; DOWNTIME; THE CLAIMS OF THIRD PARTIES INCLUDING CUSTOMERS; AND INJURY TO PROPERTY.

f. Limitations on Recipient Disclosure of Grant Data, Information, Reports and Records

- 1) Recipient will not disclose the contents of the final or any preliminary product or report without first providing a copy of the disclosure document for review and comment to the Commission Project Manager. The Recipient shall consider the comments of the Commission Project Manager and use professional judgment in revising the reports, information or data accordingly.
- 2) After any document submitted has become a part of the public records of the state, Recipient may, if it wishes to do so at its own expense, publish or utilize the same, but shall include the legal notice stated above.
- 3) Notwithstanding the foregoing, in the event any public statement is made by the Commission as to the role of Recipient or the content of any preliminary or Final Report of Recipient hereunder, Recipient may, if it believes such statement to be incorrect, state publicly what it believes is correct.
- 4) No record that is provided by the Commission to Recipient for Recipient's use in executing this Agreement and which has been designated as confidential, or is the subject of a pending Application for Confidential Designation, except as provided in Title 20, CCR Sections 2506 and 2507, shall be disclosed, unless disclosure is ordered by a court of competent jurisdiction (Title 20 CCR Section 2501, et seq.). At the election of the Commission Project Manager, the Recipient, its employees and any

subcontractors shall execute a "Confidentiality Agreement," supplied by the Commission Project Manager.

- 5) Recipient acknowledges that each of its officers, employees, and subcontractors who are involved in the performance of this Agreement will be informed about the restrictions contained herein and to abide by the above terms.

g. Proprietary Data

Proprietary data owned by the Recipient shall remain with the Recipient throughout the term of this Agreement and thereafter. The extent of Commission access to the same and the testimony available regarding the same shall be limited to that reasonably necessary to demonstrate, in a scientific manner to the satisfaction of scientific persons, the validity of any premise, postulate or conclusion referred to or expressed in any deliverable hereunder.

h. Preservation of Data

Any data which is reserved to the Recipient by the express terms hereof, and pre-existing proprietary or confidential data which has been utilized to support any premise, postulate or conclusion referred to or expressed in any product hereunder, shall be preserved by the Recipient at the Recipient's own expense for a period of not less than three years after receipt and approval by the Commission of the Final Report herein.

i. Destruction of Data

Before the expiration of three years and before changing the form of or destroying any such data, the Recipient shall notify Commission of any such contemplated action and Commission may, within thirty (30) days after said notification, determine whether it desires said data to be further preserved. If Commission so elects, the expense of further preserving said data shall be paid for by the Commission. Recipient agrees that Commission may, at its own expense, have reasonable access to said data throughout the time during which said data is preserved. Recipient agrees to use its best efforts to identify competent witnesses to testify in any court of law regarding said data or, at Commission's expense, to furnish such competent witnesses.

j. Patent Rights

- 1) Patent rights for any Subject Invention, whether actually patented or unpatented, will be the property of the Recipient whose employees or researchers are inventors of such invention pursuant to U.S. patent law, subject to the Commission obtaining a no-cost, nonexclusive,

nontransferable, irrevocable, perpetual, royalty-free, worldwide license to use or have practiced such rights for or on behalf of the State of California for governmental purposes. Commission shall not purposefully enter into competition with a Licensee or take affirmative actions intended to effectively destroy the commercial market where a Licensee has introduced a Licensed Product. Recipient must obtain Agreements to effectuate this clause with all persons or entities, except for the U.S. Department of Energy (DOE), obtaining ownership interest in such patent rights. Previously documented (whether patented or unpatented under the patent laws of the United States of America or any foreign country) inventions are exempt from this provision.

- 2) The Recipient will disclose to Commission on a confidential basis all Subject Inventions. The Commission may provide any suggestions to the Recipient concerning commercialization strategies and/or potential licensees for such invention within sixty (60) days of receiving the disclosure from the Recipient. Recipient shall send, by March 1 of each year, a report to the Commission that provides non-proprietary information on the status of any patents and/or licensing Agreements executed or under negotiation for Subject Inventions and/or activities by Licensee related to the development and testing of Licensed Product.
- 3) March-in Rights. With respect to any Subject Invention in which the Recipient has acquired title, to the extent permissible under Federal laws and regulations, the Commission shall have the right to require the Recipient, an assignee or Licensee of such patent rights to grant a nonexclusive, partially exclusive, or exclusive license in any field of use to a responsible applicant, upon terms that are reasonable under the circumstances, and if the Recipient, assignee, or Licensee refuses such request, to grant such a license itself, if the Commission determines that such:
 - a) Action is necessary because the Recipient, Licensee, or assignee has not taken, or is not expected to take within a reasonable time, effective steps to achieve practical application of the patent rights in such field of use; or
 - b) Action is necessary to alleviate health or safety needs that are not reasonably satisfied by the Recipient, assignees, or their Licensees.

Final resolution, if not resolved under the "DISPUTES" paragraph, will be settled in the courts of the State of California. The parties may refer to the Federal Government's procedures for handling march-in rights.

Future Reductions. The Recipient will submit in confidence within ninety (90) days after termination or expiration of the grant award, a report listing inventions that are conceived, but not actually reduced to practice, in the performance of this grant award. The Commission will identify in writing within sixty (60) days to the Recipient those conceptions that it desires to reserve rights to should Recipient desire to actually reduce to practice those identified conceptions within forty-two (42) months after the termination or expiration of the grant award. Recipient has an affirmative duty to report to the Commission those conceptions reduced to practice within the forty-two (42) months period.

k. Commission's Rights to Invention.

Recipient and all persons and/or entities obtaining an ownership interest in subject invention(s) shall include within the specification of any United States patent application, and any patent issuing thereon covering a subject invention, the following statement:

"THIS INVENTION WAS MADE WITH STATE OF CALIFORNIA SUPPORT
UNDER CALIFORNIA ENERGY COMMISSION GRANT NUMBER
_____. THE ENERGY COMMISSION HAS CERTAIN RIGHTS TO
THIS INVENTION."

l. Copyrights

- 1) Copyrightable material first produced under this Agreement shall be owned by the Recipient, limited by the license granted to the Commission in 2) below.
- 2) Recipient agrees to grant the Commission a royalty-free, no-cost nonexclusive, irrevocable, nontransferable worldwide, perpetual license to produce, translate, publish, use and dispose of, and to authorize others to produce, translate, publish, use and dispose of all copyrightable material first produced or composed in the performance of this Agreement.
- 3) Recipient will apply copyright notices to all products using the following form or such other form as may be reasonably specified by Commission.

“©[YEAR OF FIRST PUBLICATION OF PRODUCT],
[THE COPYRIGHT HOLDER’S NAME].
ALL RIGHTS RESERVED.”

4) Software

In the event software that is not a product is developed under the Agreement, Recipient shall have the right to copyright and/or patent such

software and grants the Commission a royalty-free, no-cost, non-exclusive, irrevocable, non-transferable, world-wide, perpetual license to produce and use for governmental purposes the software, and its derivatives and upgrades that may be developed by the authors within 42 months following the termination or expiration of this Agreement. The Commission shall not purposefully enter into competition with a Licensee or take affirmative actions intended to effectively destroy the commercial market where a Licensee has introduced a licensed product.

m. Intellectual Property Indemnity

Recipient will defend and indemnify Commission from and against any claim, lawsuit or other proceeding, loss, cost, liability or expense (including court costs and reasonable fees of attorneys and other professionals) to the extent arising out of any third party claim solely arising out of the negligent or other tortious act(s) or omission(s) by the Recipient, its employees, or agents, in connection with intellectual property claims against either deliverables or the Recipient's performance thereof under this Agreement.

26. *Royalty Payments to Commission*

- a. In consideration of the Commission providing funding to Recipient, Recipient agrees to pay the Commission a portion of either Net Revenues or Net Royalties under the terms and conditions hereinafter set forth.
- b. Net Royalties. If the Performing Institution licenses to a Licensee, Recipient's obligation to make payments to the Commission shall commence from the date that the Net Royalties calculation is positive. Payments are payable in annual installments and are due the first day of March for Net Royalties calculation made for Recipient's prior fiscal year. Recipient agrees to pay to Commission an amount equivalent to 10% of the total cumulative Net Royalties for each and all Performing Institutions, less payments made by Recipient to the Commission in previous years when Net Royalties per Performing Institution were positive. Payments shall be made by check, made payable to the California Energy Commission, PIER Fund.
- c. Net Revenues. If the Performing Institution is the Licensee, Recipient's obligation to make payments to the Commission shall commence upon the first sale of the Licensed Product. Payments are payable in annual installments and are due the first day of March for the prior fiscal year of Recipient. Recipient agrees to pay an amount equivalent to 1.5% of the Net Revenues by check made payable to the California Energy Commission, PIER Fund.
- d. Recipient agrees to and shall require each Performing Institution to agree not to make any sale, license, lease, gift or other transfer of any Subject Invention, Copyrightable Work or Project-Related Products (PRP) with the intent of, or for the purpose of,

depriving Commission of Net Royalties or Net Revenues hereunder. Generally, this means that the Performing Institution will not make any sale, license, lease or other transfer of PRP for consideration other than fair market value except for research, educational, or other mutually agreed to purposes intended to serve the public benefit.

- e. Recipient and Performing Institutions shall maintain separate accounts within their financial and other records for purposes of tracking royalties and revenues due to the Commission under this Agreement.
- f. Audits on Payments to Commission. Payments to the Commission are subject to audit as provided for under Section 18, "Recordkeeping, Cost Accounting and Auditing."
- g. Defaults. In the event of default hereunder, the Commission shall be free to exercise all rights and remedies available to it herein, and under law and at equity. The occurrence of any of the following events or conditions shall constitute a default under this Agreement:
 - 1) Recipient's or Performing Institution's failure to pay when due, any amount due and payable under the terms of this contract.
- h) Recipient acknowledges that a late payment of royalties/revenues owed to the Commission will cause the Commission to incur costs not contemplated by the parties. If a royalty/revenue payment is not paid when due, Recipient agrees to pay the Commission a late fee equal to two percent (2%) of the payment due. Additionally, Recipient agrees that royalty/revenue payments not paid within fifteen (15) days of the due date shall thereupon become debt obligations of Recipient to the Commission, due upon demand and bearing interest at the maximum interest rate allowed by law.
- i) The parties agree that Recipient does not guarantee compliance with payments under clause 25 in the event of default by a Performing Institution. Amounts in default and not paid by Performing Institution will not be paid by Recipient under 25.B and C. and the fees and obligations of 25.H. pursuant to such default and non-payment shall not be a responsibility of Recipient. However, Recipient has an affirmative duty to monitor Performing Institutions' compliance and take reasonable enforcement measures calculated to obtain Performing Institutions' performance of the payment obligations of clause 25.

27. General Provisions

a. Governing Law

It is hereby understood and agreed that this Agreement shall be governed by the laws of the State of California as to interpretation and performance.

b. Independent Capacity

The Recipient, and the agents and employees of the Recipient, in the performance of this Agreement, shall act in an independent capacity and not as officers or employees or agents of the State of California.

c. Assignment

Without the written consent of the Commission in the form of a formal written amendment, this Agreement is not assignable or transferable by Recipient either in whole or in part.

d. Timeliness

Time is of the essence in this Agreement.

e. Unenforceable Provision

In the event that any provision of this Agreement is unenforceable or held to be unenforceable, then the parties agree that all other provisions of this Agreement have force and effect and shall not be affected thereby.

f. Waiver

No waiver of any breach of this Agreement shall be held to be a waiver of any other or subsequent breach. All remedies afforded in this Agreement shall be taken and construed as cumulative, that is, in addition to every other remedy provided therein or by law.

g. Assurances

The Commission reserves the right to seek further written assurances from the Recipient and its team that the work of the project under this Agreement will be performed consistent with the terms of the Agreement.

h. Change in Business

(1) Recipient shall promptly notify the Commission of the occurrence of each of the following:

- (a) A change of address.
- (b) A change in the business name or ownership.
- (c) The existence of any litigation or other legal proceeding affecting the project.

- (d) The occurrence of any casualty or other loss to project personnel, equipment or third parties of a type commonly covered by insurance.
 - (e) Receipt of notice of any claim or potential claim against Recipient for patent, copyright, trademark, service mark and/or trade secret infringement that could affect the Commission's rights.
- (2) Recipient shall not change or reorganize the type of business entity under which it does business except upon prior written notification to the Commission. A change of business entity or name change requires an amendment assigning or novating the Agreement to the changed entity. In the event the Commission is not satisfied that the new entity can perform as the original Recipient, the Commission may terminate this Agreement as provided in the termination paragraph.

i. Survival of Terms

It is understood and agreed that certain provisions shall survive the completion or termination date of this Agreement for any reason. The provisions include, but are not limited to:

- "Payments of Funds"
- "Equipment"
- "Change in Business"
- "Disputes"
- "Termination"
- "Recordkeeping, Cost Accounting, and Auditing"
- "Indemnification"
- "Confidentiality"
- "Right of Parties Regarding Intellectual Property"
- "Royalty Payments to Commission"

28. *Certifications and Compliance*

a. Federal, State & Local Laws

Recipient shall comply with all applicable federal, state and local laws, rules and regulations.

b. Nondiscrimination Statement of Compliance

During the performance of this Agreement, Recipient and its subcontractors shall not unlawfully discriminate, harass or allow harassment, against any employee or applicant for employment because of sex, sexual orientation, race, color, ancestry, religious creed, national origin, disability (including HIV and AIDS), medical condition (cancer), age, marital status, and denial of family care leave. Recipient

and its subcontractors shall insure that the evaluation and treatment of their employees and applicants for employment are free of such discrimination and harassment. Recipient and its subcontractors shall comply with the provisions of the Fair Employment and Housing Act (Government Code Sections 12990 et seq.) and the applicable regulations promulgated thereunder (California Code of Regulations, Title 2, Section 7285.0 et seq.). The applicable regulations of the Fair Employment and Housing Commission implementing Government Code Section 12990 (a-f), set forth in Chapter 5 of Division 4 of Title 2 of the California Code of Regulations are incorporated into this Agreement by reference and made a part of it as if set forth in full. Recipient and its subcontractors shall give written notice of their obligations under this clause to labor organizations with which they have a collective bargaining or other Agreement.

The Recipient shall include the nondiscrimination and compliance provisions of this clause in all subcontracts to perform work under this Agreement.

c. Drug Free Workplace Certification

By signing this Agreement, the Recipient hereby certifies under penalty of perjury under the laws of the State of California that the Recipient will comply with the requirements of the Drug-Free Workplace Act of 1990 (Government Code Section 8350 et seq.) and will provide a drug-free workplace by taking the following actions:

- i) Publish a statement notifying employees that unlawful manufacture, distribution, dispensation, possession, or use of a controlled substance is prohibited and specifying actions to be taken against employees for violations as required by Government Code Section 8355(a).
- ii) Establish a Drug-Free Awareness Program as required by Government Code Section 8355(b) to inform employees about all of the following:
 - The dangers of drug abuse in the workplace;
 - The person's or organization's policy of maintaining a drug-free workplace;
 - Any available counseling, rehabilitation, and employee assistance programs; and
 - Penalties that may be imposed upon employees for drug abuse violations.

iii) Provide, as required by Government Code Section 8355(c), that every employee who works on the proposed project:

- Will receive a copy of the company's drug-free policy statement;
- Will agree to abide by the terms of the company's statement as a condition of employment on the project.

Failure to comply with these requirements may result in suspension of payments under the Agreement or termination of the Agreement or both, and the Recipient may be ineligible for any future state awards if the Commission determines that any of the following has occurred: (1) the Recipient has made false certification, or (2) violates the certification by failing to carry out the requirements as noted above.

d. National Labor Relations Board Certification (Not applicable to public entities)

Recipient, by signing this Agreement, does swear under penalty of perjury that no more than one final unappealable finding of contempt of court by a Federal Court has been issued against the Recipient within the immediately preceding two year period because of the Recipient's failure to comply with an order of a Federal Court which orders the Recipient to comply with an order of the National Labor Relations Board.

e. Recycling Certification

The Recipient shall certify in writing under penalty of perjury, the minimum, if not exact, percentage of recycled content, both post consumer waste and secondary waste as defined in the Public Contract Code, Sections 12161 and 12200, in materials, goods, or supplies offered or products used in the performance of this Agreement, regardless of whether the product meets the required recycled product percentage as defined in the Public Contract Code, Sections 12161 and 12200. Recipient may certify that the product contains zero recycled content.

f. Child Support Compliance Act (Applicable to California Employers)

For any agreement in excess of \$100,000, the Recipient acknowledges that:

- i) It recognizes the importance of child and family support obligations and shall fully comply with all applicable state and federal laws relating to child and family support enforcement, including, but not limited to, disclosure of information and compliance with earnings assignment orders, as provided in Chapter 8 (commencing with section 5200) of Part 5 of Division 9 of the Family Code; and
- ii) To the best of its knowledge is fully complying with the earnings assignment orders of all employees and is providing the names of all new

employees to the New Hire Registry maintained by the California Employment Development Department.

g. Air or Water Pollution Violation

Under the state laws, the Recipient shall not be:

- (1) in violation of any order or resolution not subject to review promulgated by the State Air Resources Board or an air pollution control district;
- (2) subject to cease and desist order not subject to review issued pursuant to Section 13301 of the Water Code for violation of waste discharge requirements or discharge prohibitions; or
- (3) finally determined to be in violation of provisions of federal law relating to air or water pollution.

h. Americans With Disabilities Act

By signing this Agreement, Recipient assures the State that it complies with the Americans with Disabilities Act (ADA) of 1990 (42 U.S.C. 12101, et seq.), which prohibits discrimination on the basis of disability, as well as applicable regulations and guidelines issued pursuant to the ADA.

i. Union Activity

By signing this Agreement, the Recipient hereby certifies that Recipient will not use grant funds for any expenses to assist, promote, or deter union organizing. Any Recipient that makes expenditures to assist, promote, or deter union organizing shall maintain records sufficient to show that state funds have not been used for those expenditures (Government Code Section 16645.2).

PAYMENT REQUEST FORM

ATTACHMENT 1

CONTENT AND FORMAT OF PROGRESS REPORTS

PROGRESS REPORT for Project Title, Contract Number Month, Year

Contractor Project Manager:
Commission Project Manager:

What we planned to accomplish this period

[This is taken directly from the section on “What we expect to accomplish during the next period” from the last progress report]

What we actually accomplished this period

[Concise description of major activities and accomplishments.]

How we are doing compared to our plan

[Explain the differences, if any, between the planned and the actual accomplishments. Describe what needs to be done, if anything, to get back on track.]

Significant problems or changes

[Describe any significant technical or fiscal problems. Request approval for significant changes in work scope, revised milestone due dates, changes in key personnel assigned to the project, or reallocation of budget cost categories. If none, include the following statement: “Progress and expenditures will result in project being completed on time and within budget.”]

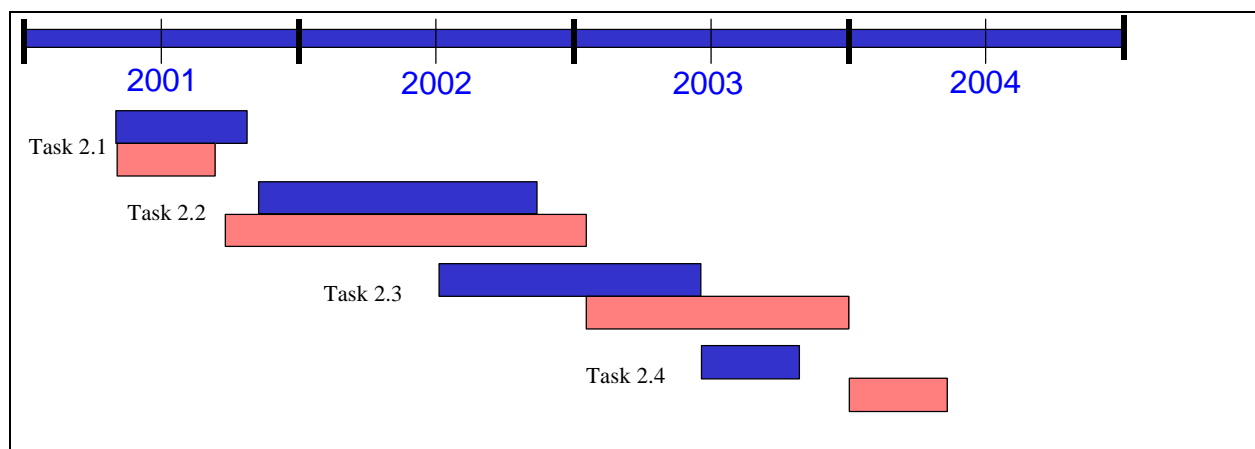
What we expect to accomplish during the next period

[Concise description of major activities and accomplishments expected. This will be transferred to the next progress report]]

Status of Milestones and Deliverables:

[This should be the complete list as contained in the revised scope of work and Exhibit B. Highlight differences between actual and planned.]

Description	Start Date		Due Date		Status (%)
	Planned	Actual	Planned	Actual	
Identify top 3 assessment candidates	4/15/12	4/15/12	5/1/12	5/1/12	Ontime 100%
Develop test plan	4/20/12	4/10/12	7/7/12	6/10/12	Ahead 100%
Analyze experimental data	5/1/12	6/1/12	1/1/13	2/1/13	Delayed 25%



Overall schedule for the _____ project.

[Planned is solid blue, actual is red striped. This work flow diagram needs to correlate with the schedule in Exhibit B. This example has been prepared as a Word Picture, but a comparable Excel diagram or Gantt chart is fine.]

Overview of Fiscal Status: (See invoices for detail.)

[It is useful to track the rate of expenditure of project funds. The most useful way to do this is to compare the actual expenditure rate with the planned expenditure rate. You get the planned rate at the beginning of the project, so it becomes a baseline. If you change course at a critical project review, you should show the original and the modified baseline, and then track against the new one.]

Photographs:

[Include photographs where appropriate to document progress.]

Notes:

The tracking for tasks and money is generally done at the major task level, but this depends on the project and fiscal controls.

Notice that there is no technical detail in these reports. This should come in specific deliverables so that critical project management information doesn't get lost. If the contractor is reporting monthly, but submitting invoices quarterly, then use the three monthly reports as an equivalent quarterly report. Don't make them write another report just to get paid.

The progress report on each project should be 1-2 pages long (plus photographs) and take about 1 hour to prepare for each reporting period.

ATTACHMENT 2

FORMAT FOR FINAL REPORTS

PIER Reports contain the following sections:

- Cover Page and Title Page
- Legal Notice
- Acknowledgement Page
- Table of Contents
- Preface
- Executive Summary
- Abstract
- Introduction
- Project Approach
- Project Outcomes
- Conclusions and Recommendations
- Endnotes
- References
- Glossary
- Appendices
- Attachments

Please contact Susan Patterson (916) 654-4992, spatters@energy.state.ca.us before starting your final report. She will explain the process and go over any questions you have. It is best if both the Recipient and the Commission Project Manager participate in this discussion.

Please use the MS Office Suite for your final reports. The version currently in use at the Commission is “97” operating on Windows 98. Please contact us if significant portions of the report will be in other programs.

Cover Page and Title Page

Please create one page with the following information. It will be used to create the cover and title pages.

- Title of the Report
- Name of primary author(s) or principal investigator
- Author's company, organization or affiliation
- Location of author's company, organization or affiliation (City, State)
- Name of Energy Commission Project Manager
- PIER Program Area
- PIER Program Area Lead
- Grant Award Number
- Amount of Grant
- Publication Number (Ask Susan Patterson, (916) 654-4992 for this number.)
- Publication Date (Month and Year. Verify with Susan Patterson.)

Legal Notice

Use the following notice:

Legal Notice

This report was prepared as a result of work sponsored by the California Energy Commission (Commission, Energy Commission). It does not necessarily represent the views of the Commission, its employees, or the State of California. The Commission, the State of California, its employees, contractors, and subcontractors make no warranty, express or implied, and assume no legal liability for the information in this report; nor does any party represent that the use of this information will not infringe upon privately owned rights. This report has not been approved or disapproved by the Commission nor has the Commission passed upon the accuracy or adequacy of this information in this report.

NOTE: The abbreviation "CEC" is not allowed in final reports. Chose either Commission or Energy Commission throughout the report. Be consistent with one of the choices, and use it throughout the report.

Acknowledgement Page

This is the place for the author or principal investigator to acknowledge or express appreciation to those who participated in the project. This may be a paragraph, or a list of names, and if appropriate their affiliations.

Table of Contents

Sections to be included in the Table of Contents are as follows:

Preface

Executive Summary

Abstract

1. Introduction
 - Background and Overview (Why this project was necessary)
 - Project Objectives (What you planned to accomplish)
 - Report Organization
2. Project Approach (What you did to accomplish your objectives)
3. Project Outcomes (What happened?)
4. Conclusions and Recommendations
 - Conclusions (What you learned from what happened)
 - Commercialization Potential
 - Recommendations (What you think should occur next)
 - Benefits to California

Endnotes

References

Glossary

List of Figures

List of Tables

Appendices

Attachments

Preface

Fill in the grant project name, grant award number, report title, organization, research area, and numbers in the second to the last paragraph. Use the following Preface:

Preface

The Public Interest Energy Research (PIER) Program supports public interest energy research and development that will help improve the quality of life in California by bringing environmentally safe, affordable, and reliable energy services and products to the marketplace.

The PIER Program, managed by the California Energy Commission (Commission), annually awards up to \$62 million to conduct the most promising public interest energy research by partnering with Research, Development, and Demonstration (RD&D) organizations, including individuals, businesses, utilities, and public or private research institutions.

PIER funding efforts are focused on the following six RD&D program areas:

- Buildings End-Use Energy Efficiency
- Industrial/Agricultural/Water End-Use Energy Efficiency
- Renewable Energy
- Environmentally-Preferred Advanced Generation
- Energy-Related Environmental Research
- Strategic Energy Research.

What follows is the final report for the [Grant Project Name], [Grant Number], conducted by the [Company/Organization/Affiliation]. The report is entitled [Report Title]. This project contributes to the [PIER Program Area] program.

For more information on the PIER Program, please visit the Commission's Web site at: <http://www.energy.ca.gov/research/index.html> or contact the Commission's Publications Unit at 916-654-5200.

Executive Summary

A final report in miniature, containing all key information. Summarizes the introduction, purpose, project objectives, project outcomes, conclusions, recommendations and benefits to California. It is intended to be short, bullet formatting is suggested. Assume a non-technical, management-level readership. You may want to write this as if you will hand it out at a trade show. Emphasize the benefits of the project and include who should care and why. Put on the hat of an inquisitive, reasonably well-educated lay reader who may be interested in purchasing or implementing the subject technology. Pretend that they just paid for this research project and they want to understand how and why you spent their money.

If your project has more than one project, repeat this organization for each project area. The Executive Summary needs to summarize the report, not present new information found nowhere else in the document. Go the Commission web site for further examples.

Abstract

This section should be the technical counterpart to the executive summary. Less marketing and sales oriented than the Executive Summary. This should be similar to what you would find in a technical trade periodical. Limited to 250 words, essentially a very brief, Executive Summary. The Abstract covers the purpose, objectives, outcomes and conclusions. Contains 5-10 keywords for computer searches. Geared toward a more technical audience.

Introduction

- Background and Overview (Why this project was necessary) - Provide relevant background, identify this project's subject area and the goals of this research. Use Stages and Gates terminology, where appropriate, to identify what stage the project has reached in its path to market. Refer to the contract for this information.
- Project Objectives (What you planned to accomplish) - Present the technical and economic objectives for your project. The objectives need to contain the way(s) to measure or know the success of having reached the objective. Use Stages and Gates terminology where appropriate. These should be taken from the contract and should reflect any changes made during critical project reviews or at other times during the course of the project. (Describe why these changes were made in the Project Approach section.)

Each objective shall be separately identified, a useful form is:

Project objectives were to:

- Verify (an action verb followed by relevant text)....
 - Determine....
 - Measure...
 - Develop....
- Report Organization – Provides a roadmap to the rest of the report. If there are separate final reports for a multitasked project, set the context in Background section and refer the reader to their location here.

Project Approach

This section discusses the tasks you undertook and your approach to the research (What you did to accomplish your objectives). Discuss the testing procedures you undertook and the system modifications and improvements you made.

Project Outcomes

This is where you present your results (What happened). Organize this section so that results are presented in the same order as the objectives. A short version of each Outcome should be stated in bullet form. Supporting paragraphs that describe each Outcome should follow each bullet.

There can be more Outcomes than there were Objectives. For example, there may be more than one Outcome per Objective. It is also possible to have an unanticipated Outcome during your research. However, you cannot have stranded objectives; all Objectives, whether met or not, must be discussed in this section. If this section is particularly long, then it is useful to create a summary at the end of this section where all of the bullets are drawn together as a summary.

Conclusions and Recommendations

- Conclusions (What you learned from what happened) - Organize the Conclusions in the same order as Objectives and Outcomes. You may have Conclusions that are broader than individual Objectives and Outcomes. Please present these after you present the individual Conclusions. Conclusions must be drawn from evidence presented in the report.
- Commercialization Potential - This is where you should directly address stages and gates. Explain where your project is in stages and gates. If your project had a task to prepare a Production Readiness Plan or a similar effort related to assessing where the research is in relationship to being used in its relevant markets (i.e. Stages and Gates), this is the place to discuss that task.
- Recommendations (What you think should occur next) - Recommendations should derive from the Conclusions presented. Recommendations specific to individual Objectives, Outcomes and Conclusions should be presented in the original order. General Recommendations should follow. Use Stages and Gates terminology where appropriate. What is the next stage for this project?
- Benefits to California - This section discussed two issues: (1) what benefits has California already received from this contract, if applicable, and (2) if this project is successful and the results widely used, how will California benefit. These benefits need to be related to the problems this research was intended to address. Refer to the Introduction section of the report.

Endnotes

Endnotes are preferred to footnotes.

Glossary

If there are more than 10 acronyms then a glossary with definitions for each acronym should be provided at the end of the report.

References

This is where you list all documents referred to in the body of the report. List references in standard bibliographic format. Be sure to check that shorthand references contained in the body of the report are accurate. Any documents referred to in the Appendices should be listed in the reference section in the appropriate Appendix.

Appendices

Designated by Roman numerals.

Attachments

If absolutely required, designated by Roman numerals.

Here is some additional guidance on how to ensure that the reports are technically accurate and internally consistent:

1. Put on the hat of an inquisitive, reasonably well-educated lay reader. Pretend that they just paid for this research project and they want to understand how and why you spent their money.
2. Apply the test of completeness. Are all the pieces there? Are all the references clear and do those in the text match those in the reference section? Are the relationships between the partners and the players clearly explained?
3. Apply the test of logic. Does the document flow and make sense? Is the need for the research clearly described? Is the technical approach clearly described? Do the conclusions make sense? Are they drawn from the analysis? Do the numbers check? Is it clear how the numbers were derived?
4. If the project didn't do everything it intended to do, explain.
5. The final report must primarily address the project work statement. Doing this will help manage the scope and the effort required for this report. A) Some research projects are Stage X (e.g. one stage of stages and gates) of a longer-term program and all work done during the time the Commission was involved was funded by all of the partners. B) In other cases, the work being done in this Stage of the program had more tasks than the Commission participated in, although some of the results of this work may have impacted, or been impacted by the other tasks. The Commission funded portion of the research project (or program) needs to be clearly differentiated from the overall program of which this portion of the research is a part. Comments about the program should not be intermingled with those about the project.

6. The objectives of the research project need to be clearly stated. The objectives of the Commission funded research project need to be clearly differentiated from the objectives of the overall program of which the research is a part. The objectives of the program should not be intermingled with the objectives of the project. If some objectives of the program will be performed elsewhere, or at another time, this needs to be explained. The report should then stay focused on the objectives of this project.
7. There needs to be a clear relationship between the objectives and the outcomes. The outcomes of the Commission funded research project need to be clearly differentiated from the outcomes of the overall program of which the research is a part. The outcomes of the program should not be intermingled with the outcomes of the project.
8. The methods used to conduct the research need to be explained.
9. Data that is presented in the report needs to be analyzed. If you present a picture, graph or table, be sure that you discuss it in the text, not just refer to it.
10. Each conclusion needs to be substantiated by the analysis contained in the report.
11. Figures and Tables must clearly relate to, and be consistent with the text, and vice versa. (If the text says the generator had a capacity of 30 kW, the table shouldn't say it was 31.2 kW.)
12. Use consistent references to report performance specifications and results. For example, if a piece of equipment is to be referred to by its nominal nameplate rating then use that reference consistently throughout the report. If however the desired number was the measured performance of the device, (almost always different from nameplate) then consistently use that measured number. Do not mix the two in the narrative.
13. The text needs to clearly refer to the attached appendices. It should also explain how the data in the appendices matters to the text. If it doesn't really matter, it probably should be dropped. (You may still need it because it is a deliverable according to the contract, so check this carefully.) References to multi-page appendices need to be specific to the page or section of the appendix, not just a general reference to Appendix X.

Exhibit 7: Summary of Allowable Travel and Per Diem Expenses

Summary of Allowable Travel and Per Diem Expenses

Recipients shall be reimbursed for travel and per diem on the same basis as nonrepresented State employees. The rates listed below will be in effect for the term of this Agreement, unless and until the State's per diem reimbursement rates for nonrepresented employees are revised. Travel expenses not listed in this section cannot be reimbursed.

Travel that has not been budgeted in the Budget shall require prior written authorization from the Commission Project Manager. Travel shall be paid from the Recipient's office location where the employees assigned responsibilities for this agreement are permanently assigned.

Recipient must document and prepare travel expense claims as follows:

- Recipient's invoice must detail expenses using the rates listed below.
- Expenses must be listed by trip including dates and times of departure and return, in order to establish appropriate per diem rates (employee's travel claim may be attached instead).
- Attach required receipts for travel expenses claimed (receipts are not required for meals or incidentals within allowable rates, but you must retain all meal receipts for audit by the State or IRS).

Transportation Rates

- 1) Common carrier, airline coach class or equivalent are reimbursable in accordance with receipts or vouchers attached to Recipient's invoice verifying expenditure.
- 2) Private or Recipient-owned automobile mileage is reimbursable up to 34 cents per mile. However, if travel by common carrier is more economical than by automobile, the rate for the common carrier will be reimbursed.
- 3) Rental car receipts must be attached to Recipient's travel expense claim. However, if taxi service is less expensive than a rental car the rate for taxi will be reimbursed. **NOTE: Insurance coverage is not reimbursable.**
- 4) Parking fees, taxi fees, tolls and public transit fees may be reimbursed up to \$10.00 without receipt.

In-State Travel Per Diem Rates

- 1) Apply to travel **more than 50 miles** away from Recipient's headquarters,

2) Per diem is reimbursable as follows:

- a) **Less than 24 hour trip**, Recipient shall be reimbursed for meals and lodging according to the following rates:

Breakfast: Up to \$ 6.00, if began at or prior to 6 a.m. and terminated at or after 9 a.m.
Lunch: Not reimbursed on trip of less than 24 hours
Dinner: Up to \$18.00, if began at or prior to 4 p.m. and terminated at or after 7 p.m.
Incidentals: Not reimbursed on trip of less than 24 hours

- b) **More than 24 hours**, Recipient will be reimbursed for each 24 hour period for meals, lodging and incidentals according to the following rates:

Breakfast: Up to \$ 6.00 if trip began at or before 6 am.
Lunch: Up to \$ 10.00 if trip began at or before 11am.
Dinner: Up to \$18.00 if trip began at or before 5 pm.
Incidentals: Up to \$6.00

- c) Time Frame for fractional day after 24 hours of travel:

Breakfast: If trip ends at or after 8 a.m.
Lunch: If trip ends at or after 2 p.m.
Dinner: If trip ends at or after 7 p.m.

2) Lodging (Receipt Required)

- a) Statewide, except in b) and c) below, actual receipted lodging up to \$84.00 per night plus tax.
- b) When required to obtain lodging in the counties of Los Angeles and San Diego, reimbursement will be for actual receipted lodging to a maximum of \$110.00 per night plus tax.
- c) When required to obtain lodging in the counties of Alameda, San Francisco, San Mateo and Santa Clara, reimbursement will be for actual receipted lodging to a maximum of \$140.00 per night plus tax.

Out-of-State Travel Per Diem Rates

Meals/Incidentals: Same as in-state rates

Lodging: Actual expense with receipt (subject to Commission Project Manager approval).

Out-of-Country Travel Per Diem Rates

Meals/Incidentals: Actual expense in accordance with foreign travel rates published by U.S. Government.

Lodging: Actual expense with receipt (subject to Commission Project Manager approval).

Exhibit 8: *Security Checklist*

California Energy Commission Loan Programs

SECURITY CHECKLIST

In addition to your signed Loan Agreement and Promissory Note, you must submit additional documents to secure the total value of your loan. This list outlines the minimum requirements for some of the most common items that can be used to secure your loan. All terms and requirements are subject to change without notice. The Energy Commission reserves the right to accept, modify, or reject the security offered. In addition to the specific requirements for each type of security listed in Section A below, you will be required to sign a Security Agreement (included as part of your loan package), which will list the items you are providing as security for your loan. See Section B for Security Agreement and Loan Guaranty requirements.

NOTE: NO LOAN FUNDS WILL BE DISBURSED UNTIL ALL REQUIRED SECURITY DOCUMENTS ARE COMPLETED, SIGNED, AND RETURNED TO, AND APPROVED BY, THE CALIFORNIA ENERGY COMMISSION.

A. REQUIREMENTS FOR SPECIFIC TYPES OF SECURITY

1. Equipment Purchased with Commission Loan Funds

Equipment will be discounted by 50 percent of book value. A UCC form (Uniform Commercial Code Financing Statement) will be completed and filed by the Energy Commission with the Secretary of State's office.

IF THE EQUIPMENT IS NOT PURCHASED WITH COMMISSION LOAN FUNDS, ALSO PROVIDE:

- ☐ A complete description of the equipment to be pledged, including model and serial numbers.
- ☐ Certificates of title, paid-in-full invoices, and other information to prove ownership.
- ☐ List of other creditors with security interest in the equipment, what position they hold, and amount of their secured interest.
- ☐ Statement of account balance from each creditor holding a security interest.
- ☐ Appraisal of equipment. The Commission must approve appraiser and method(s) of appraisal.

2. Certificate of Deposit

- ☐ Provide the certificate signed by a bank representative. The Certificate of Deposit must:
- a. Be issued in the name of the Borrower AND State of California, California Energy Commission, with all earnings reported under the Borrower's taxpayer identification number.
 - b. Be negotiable by Commission signature alone.
 - c. Have a maturity date equal to or greater than the repayment term of the loan.
 - d. Be issued by an institution, which is a member of the FDIC or NCUA.
 - e. Be equal to or less than \$ 1 00,000, not exceeding FDIC or NCUA limits.
 - f. Include the following:
 - Name of joint owners.
 - Name of bank.
 - Branch location and address.
 - Account number.
 - Term of the account.

3. Deed of Trust

Real estate equity offered as security will be discounted by 25 percent of appraised value. The Energy Commission will require:

- ☐ Appraisal of property. The written appraisal must include the comparative sales approach, income approach, and cost approach of evaluation.
- ☐ List of lien holders and amounts of liens.

If the Commission's Grants and Loans Office determines there may be sufficient equity to secure the loan, you, will be directed to contact a title company to open escrow. If necessary, have the title company contact the Commission's Grants and Loans Office. The Commission will require:

- ☐ Preliminary Report.
- ☐ Copies of trust deeds and notes and statements of balance from lien holders. Statements of balance from lien holders should state whether the trust deed/note is open or closed to future advances and whether future advances are obligatory or optional.
- ☐ Note and Deed of Trust with Assignment of Rents with State of California, California Energy Commission, as beneficiary. Contact the Commission's Grants and Loans Office to obtain the Note and have the title company prepare the Deed of Trust for Commission review.
- ☐ Policy of Title Insurance (ALTA policy) equal to the value of the note.

4. Letter of Credit

- ☐ Original Letter of Credit from your bank. Have your bank contact the Commission's Grants and Loans Office to negotiate Letter of Credit terms.

5. Other

Contact the Commission's Grants and Loans Office at (916) 654-4381.

B. SECURITY AGREEMENT AND LOAN GUARANTY REQUIREMENTS

Please refer to the applicable following section(s). The Energy Commission will provide the appropriate documents for your signature.

1. Borrower (Individual, Partnership, or Corporation) Securing Loan with Borrower's Property

- ☐ Security Agreement. Lists Borrower's property offered as security at the appropriate discounted value. For partnerships, all general partners must sign; for corporations, the president or authorized designee must sign. Provide other documents as listed in Section A.

2. Borrower (Individual- Partnership2. Corporation) Securing Loan with Third Party's Property (for example, a corporation securing with individual's personal property, an individual securing with a relative's property)

- ☐ Loan Guaranty (signed by Third Party). Signatures on guarantees must be notarized.

- ☐ Security Agreement (signed by Third Party). Lists Third Party's property offered as security at the appropriate discounted value. Provide other documents as listed in Section A.

3. Corporation/Partnerships

In addition to the above, the Borrower must provide the following:

- ☐ Articles of Incorporation or Partnership Agreement.
- ☐ Personal Loan Guaranty signed by each owner of the corporation or each general partner and his/her spouse. Signatures on guarantees must be notarized.